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ON GUARD.

There are indications here and there that, in spite of expensive lessons of the past in plausible schemes for immigration to the South, some Southerners are on the verge of paying expensively for other lessons of the kind.

THE COST OF LIVING.

Much has been said recently, much is being said and much will be said during the next few months about the increase in the past 10 years in the cost of living. Divers and sundry suggestions for the reduction of the cost will be made. Perhaps a few figures based upon census returns may throw light upon some of the causes of the increased cost of living and help to steer the investigator away from dangerous paths in seeking a remedy. In the following table are compared the increases in population in Continental United States in 10 years and in certain agricultural products in a like period:

	1899.	1909.	Increase.	Increase per cent.
Corn, bushels.....	2,666,324,370	2,552,189,630	*114,134,740	*4.3
Wheat, bushels.....	658,534,252	683,319,697	24,815,445	3.8
Oats, bushels.....	943,389,375	1,007,129,447	63,740,072	6.8
Hay, etc., tons.....	79,251,562	97,147,446	17,895,884	22.6
Potatoes, bushels.....	273,313,167	389,194,965	115,876,798	42.4
Steers and bulls.....	116,531,518	113,845,088	*2,686,430	*16.2
Cows.....	128,691,827	132,369,315	3,677,488	*12.9
Population.....	175,994,575	191,972,266	15,977,691	21.0

*Decrease. †1900. ‡1910.

In the face of an increase of 21 per cent. in the population between 1900 and 1910 there was an actual decrease of 2,689,430 in the number of bulls and steers, an actual decrease in the annual production of corn annually of 114,134,740 bushels, an increase of only 3.8 per cent. in wheat, of only 6.8 per cent. in oats, of 12.9 per cent. in the number of

cows, and of 22.6 per cent. in hay and forage. Of the group of foodstuffs and feedstuffs potatoes showed the greatest increase—42.4 per cent.

In making these comparisons it must be remembered that weather conditions in different years had their effect upon the size of the crops, and that the 1900 figures for steers, bulls and cows were as of June 1, while the 1910 figures were as of April 15. Moreover, for an absolute deduction as to the relation of production of food and the increase in population, complete figures for all food products must be compared. But the figures cited ought to be sufficient to indicate that production of food has not been keeping pace with the increase in the number of consumers of food, and consequently foodstuffs must necessarily have increased in price.

Another point should not be forgotten, and that is that the number of producers of foodstuffs have not grown as rapidly as the population. Between 1900 and 1910 the population of the country increased in number 15,977,691, or at the rate of 21 per cent. Of the total increase 11,035,841, or 69 per cent., was in the urban class, that is, among inhabitants of towns and cities having more than 2500 population. In the 10 years this urban population increased at the rate of 34.9 per cent., while the rural population increased only at the rate of 11.1 per cent., marking the drift of population from country to town, a drift decreasing the number of producers of food, while increasing the number of consumers, reflected also in the fact that the area of farm lands under cultivation increased in the 10-year period only 15 per cent.

Shibboleths, such as reciprocity with Canada, free raw materials, etc., do not point the way to any material reduction in the cost of living. Free "raw" sugar, for instance, would not mean one cent less in the price of sugar to the consumer, nor would free iron ore reduce the price of the farmers' machinery or implements. There have been large additions to the cost of living made by the consumers of foodstuffs themselves, regardless of tariffs, trusts or weather conditions, and the remedy in that particular lies with the individual consumer or purchaser, whatever may be

HOW TO STRENGTHEN AND INCREASE SOUTHERN PROGRESS.

Eastern, Western, English and Canadian capitalists are at the present time putting largely over \$100,000,000 into Southern hydro-electric plants. Their plans will involve the ultimate expenditure of \$150,000,000 to \$200,000,000. Great banking houses and strong promoting concerns which have been making these water-power investments are also in many cases heavily interested in public utilities, especially street railways, gas and electric plants in the South. These concerns have staked their reputation and the money of their clients upon the South, and we believe very wisely so. In order, however, to make sure that there shall be no halting, even temporarily, in the South's progress, no lessening of the market for its securities, it is incumbent upon them, as well upon the people who control the railroads and other great enterprises in this section, to bend every energy to the development of the South and Southwest to its increase in population, in manufactures, in agriculture, in city growth and in every phase of human endeavor in order to make doubly sure the profitability of the investments which they now have in the South. Every banking house which has put the money of its clients into hydro-electric developments, in street-railway enterprises or kindred operations is vitally interested in the broadest work for Southern upbuilding. The hundreds of millions of dollars represented in these investments must be made to yield a large profit through the still broader development of every phase of Southern activity than we have yet seen. Every stockholder in these enterprises, as well as every stockholder of every railroad in the South, ought to be kept in constant touch with the progress of this section and with the opportunities which it presents for the investment of new capital and the expansion of business. The railroads of the South will need to raise a good many hundreds of millions of dollars in the next five or six years in order to increase their facilities in keeping with the potentialities of this region. They need, therefore, to cultivate among their present stockholders, as well as with the public at large, a closer acquaintanceship with the South in order that when additional capital is needed it may be the more easily secured. They should steadily broaden the knowledge of the South throughout the investing and business circles of this country and Europe, because there will be a need for almost unlimited capital to carry out the constructive work absolutely required in all parts of the South, and which will necessarily absorb hundreds of millions of dollars.

The banking houses of the East and West and England and Canada who have heavy investments in the South and the dominating powers in Southern railroads have never yet taken hold of this situation with the same energy and broadness of view which have marked the operations of other banking houses and railroad owners who have staked their reputation and the hundreds of millions of capital of their clients upon the growth of the West and the Pacific Coast. The time has come for a radical change in this respect.

Every street-railway or public-service company in the South controlled by outside capital should be an active factor in attracting men and money to its community. No other interest is more vitally concerned as to the progress of a city than the public-service corporations, whose very life depends upon the goodwill and the progress of the community in which it exists.

Railroad operators have often complained of the lack of capital to finance improvements in the South. They have to a large extent depended upon the bankers to take their securities and create a market for them, but they should consider the vital importance of making the whole country so thoroughly acquainted with the resources of the South as to create a world-wide investing demand for Southern railroad securities, those now outstanding, as well as the hundreds of millions that must be issued. Some of the railroads in the South are doing splendid work through their industrial and immigration departments in making known the advantages of this section for farmers and manufacturers, and yet the possibilities of the South are so limitless that the amount of money furnished to these industrial and immigration departments is piddling as compared with what should be at their command. Not the managers of Southern railroads, except in rare cases, but the banking houses in New York and elsewhere, who dominate these roads, are the ones upon whom the blame must rest for not providing ten times as much money for the work of these departments as they now have at their command.

It cannot be too strongly emphasized that the banking and promoting houses interested in financing Southern water-power developments must help to create the industries which will take the power thus generated.

Public-service corporations must be leaders in the upbuilding of their communities.

The railroads and the banking houses identified with all these interests must broaden their campaign in a way which as yet they have seemed to little dream of if they would make the most of the situation and bring to their security-holders and to the South the prosperity which can be created by work of this kind. These things are absolutely essential to the best interests of present investors in Southern securities, to create a broader demand for new securities and a broader expression of the South's business activities.

A TYPICAL UPBUILDER OF THE SOUTH.

About a third of a century ago—during 1879 and 1880—Baltimore was one of the greatest grain-shipping points in the world. About that time the marvelous expansion in grain production in this country brought about a world-wide economic change in which the United States became the great purveyor of foodstuffs to Europe. Baltimore, through the energy and broad business ability of a few men of great power, promptly took rank as one of the great grain-exporting centers of the country; in fact, one of the great grain markets of the world. The death of Gen. John Gill a few days ago calls to mind the magnitude of the grain trade of those days and the pre-eminence of the firm of Gill & Fisher as grain exporters at that time. General Gill was a Virginian who after the war settled in Baltimore, and with the late Charles D. Fisher formed the grain house of Gill & Fisher. Without entering into the speculative operations which have caused the wreck of so many firms, they developed the legitimate handling of grain to the point that this house became the largest exporter in the United States of grain to Europe.

Having accumulated a considerable fortune in the grain business, General Gill retired from the firm for the purpose of organizing a trust company at a time when trust companies were almost unknown except in a few leading cities of the country. In connection with some of the foremost capitalists of the city, he formed the Mercantile Trust Co. of Baltimore, of which he continued to be president until his retirement a few years ago by reason of declining health. During his presidency General Gill made the Mercantile Trust Co. a strong factor in railroad and industrial development of the South. Guarding its operations with the extreme care of a conservative financier, and avoiding, as he had done in the creation of his great grain business, speculative operations, he made the Mercantile Trust Co. a power in Baltimore and in the South for the upbuilding of this section. When, after many years of active management, he retired from the presidency, he left to the guidance of other men a great institution, worthy of the financial acumen and the business ability of a man who had been equal to creating one of the greatest grain-handling concerns in the world.

General Gill was a type of the strong men who in days past achieved great things for their city and their section, as well as for themselves. Men who are studying the material advancement of Baltimore, as well as those who are interested in the progress of other cities or sections, may well study the business activities of the firm of Gill & Fisher, founded by two of the courtliest gentlemen who ever graced the city of Baltimore, a firm which still continues under that name with able management, though they have both passed away, and the activities of the trust company founded by General Gill, and which is today, as during the time of his administration, a financial institution of great power for the advancement of the South.

These men were types of the giants of the old South who came out of the war with energy unabated by its hard struggles, with an ability for business as great as the ability of the Southern soldier to march farther and fight harder on scanty fare than any other

soldiers the world has ever known. In these days when there is a disposition to count on "boomery" as the chief factor in building a community, it is worth while stopping to think of the actual achievements of John Gill, Charles D. Fisher and their associates in the creation of a great grain industry so far-reaching in its importance as was theirs, and then turn their energy from that line of activity to the development of a great financial institution, for Charles D. Fisher was during his lifetime associated with General Gill as a director in the Mercantile Trust Co. Baltimore and the South need such men of large vision, with the ability which they had to carry to success their great undertakings.

A PICTURE OF FUTURE RAILROADING.

Much attention has been attracted by an address delivered several weeks ago by President E. M. Herr of the Westinghouse Electric & Manufacturing Co. before the American Railway Guild and in which he discussed the use of electricity on railways, treating it in a masterly manner and demonstrating that electric motive power is already proved effective for either freight or passenger service, but that its wider adoption in place of steam awaits a reduction in the cost of producing power at large central stations operated at full working capacity, which is necessary to make a rate that will be satisfactory to the railroad companies.

Excepting the use of electric locomotives on terminal railroads and upon here and there a particularly busy section of main line for suburban service, there is now small use of electric motive power by any of the great steam railroad companies. The lines which perform the really heavy service of transportation still use steam locomotives for the purpose, and designers are constantly engaged upon efforts to produce powerful and still more powerful engines to perform given tasks which arise in the regular course of operation upon different roads. Huge consolidation locomotives and big Mallet compounds are every now and then heard of, each a little large or heavier and of greater capacity than any of its predecessors. Their great fireboxes are demanding greater and greater expenditures of human energy and brawn to keep such gigantic machines working at proper degrees of efficiency, and yet the desired relief from such exhausting conditions of labor appears to be still far in the future.

About 17 years ago the Baltimore & Ohio Railroad began the operation of trains through the belt-line tunnels at Baltimore with electric locomotives built by the General Electric Co. These were the first electric engines of great power used in the United States and probably in the world, although electric advancement in railway service was almost equally rapid in Europe. Since then electric locomotives have come into service on various terminal lines, and particularly upon the New York Central road for some distance out of New York city, while of the most recent adaptations of electric engines to heavy work at large stations is that of the Pennsylvania Railroad on Manhattan Island, the engines for which were built in large part by the Westinghouse Company. We have also seen the Pennsylvania, the New York, New Haven & Hartford and other companies utilize heavy motor coaches for rail-

road service in place of steam-drawn trains, yet upon the great main lines and for the handling of through, heavy expresses electricity continues conspicuous by its absence.

Mr. Herr frankly acknowledges that electricity has as yet nothing to offer as a substitute for the steam locomotive in all its applications, but he does point out that when the railroads offer to the electric-producing plants a great volume of business (as they will do ultimately) the economical use of electricity upon present steam railroads will be made undeniably manifest. Moreover, the electric locomotives which will be employed will be less severe upon the rails and the roadbed than the extraordinarily large steam locomotives, and the subdivisions of power as required, which can be readily and quickly accomplished in the use of electric engines, will also make for lower costs of operation, to say naught of the cleanliness attained.

As he pictures the future, the railroads will then buy electric power delivered on their lines instead of coal, and it will be furnished from large centralized power plants so as to make failure of supply practically impossible, while it will be provided at a price that will be but a fraction of the cost of power on a steam locomotive. Furthermore, it is proven that there is no class of machinery that can be so designed to exactly meet given conditions as electrical machinery, and this will be shown in the use of electricity for railroad operation. It is already demonstrated on the subways and elevated railroads in New York city, where trains are operated upon headway absolutely impossible with steam power and with regularity and safety. Electric locomotives also offer great advantages over steam locomotives because they do not require turntables at terminals, for they can run either way with facility, and they do not need either fire or water. Much of the cleaning is also unnecessary. In fact, the flexibility and cleanliness of electric power is one of its most apparent characteristics.

Truly it is a most attractive forecast of the future of railroading which Mr. Herr presents, and small imagination is required to conceive of the manifold advantages to both the corporations and the public through a more general use of electricity for train operation. The many interurban railways which now give daily service in various parts of the country prove the practicability of the current for steady work, and it is only necessary to provide it in sufficient quantities and in such manner as he describes to reap benefits which will make transportation a few years hence far in advance of the transportation of today.

FACTS LIKE A FAIRY TALE.

T. S. Kyle, manager and treasurer of the Kyle Lumber Co., Gadsden, Ala., writes to the MANUFACTURERS RECORD as follows:

It is generally conceded that you are the modern John the Baptist, whose voice, crying in the Southern wilderness for the past twenty years, has done more to awaken Southern men to a sense of their great opportunities than any other agency abroad in the land. Your words of encouragement and commendation have not only stimulated Southern men to renewed effort, but have directed the attention of the world to our wonderful natural resources, and made men from all parts of civilization anxious to aid in our development and share in the prosperity to follow. The people of the South have needed you, and still need you. It has been no easy task to transform an agricultu-

ral class into manufacturers, bankers and merchants. The process is naturally slow, but how well the South has met the issues and overcome the different difficulties sounds like a fairy tale when we read what you have recently told us.

GEORGIA'S MATERIAL PROGRESS

Elsewhere in this issue the Central of Georgia Railway presents some striking facts in advertising the progress and the opportunities offered by the State of Georgia. In this statement attention is called to the remarkable progress made by Georgia since 1900. Between 1900 and 1909 the capital invested in manufacturing interests increased from \$79,000,000 to \$202,000,000. The value of farm lands, including buildings, advanced from \$183,370,000 in 1900 to \$477,603,000 in 1910. Here was an increase in the value of farm lands and buildings of \$294,000,000, the increase alone being \$110,000,000 more than the total value of 1900. The accumulation of capital in Georgia was strikingly presented in the increased resources and deposits in the banks of the State. The resources of national banks between 1900 and 1910 rose from \$23,563,000 to \$92,690,000, the resources for 1910 being nearly four times as great as in 1900. The capital invested in national banks increased at about nearly the same rate, while the individual deposits in national banks advanced from \$10,864,000 in 1900 to \$44,941,000 in 1910, thus keeping pace with the increase in the resources and banking capital. The true value of property in the State advanced during the 10 years under discussion from \$936,000,000 to \$1,570,000,000, or a gain of \$634,000,000. In presenting these facts to the public the Central of Georgia Railway says:

No one can study and analyze the table outlined above without recognizing that the marvelous development of this territory has been due to its complete possession of every advantage necessary to business success.

The intelligent presentation of the advantages of the South persistently kept before the public by the railroads and business interests of that section will unquestionably prove a powerful factor in helping to bring about still greater results during the next 10 years.

CALIFORNIA FRUIT IN COMPETITION WITH SOUTHERN.

The citrus fruit-growing sections of the South need to be awake. California is beginning to boast of what it will do in lowering the cost of shipping its citrus fruits by water when the Panama Canal is opened. The general manager of the Fruit Growers' Association of Los Angeles is quoted in the *Review of Reviews* as stating that the freight on shipping California's citrus fruit crop to the East is now \$15,000,000 a year, and that by the reduction in freight which will come through the opening of the Panama Canal there will be a saving of "\$6,000,000 annually on our oranges and lemons alone."

The writer recently heard a promotion agent of the proposed San Diego Exposition, in an address to a business body in the South, use as one of the reasons why the South should take an active part in the San Diego Exposition the fact that the Panama Canal would cut the rate of freight on California citrus fruits from \$28 a ton to \$4 a ton, apparently forgetful of the fact that the South is more deeply interested in the development of its fruit-growing interests than in the growth of California's citrus fruit activities. Southern

railroads will need to wake up to the situation. It is reported that at present the rate of freight on oranges from Los Angeles to New York is 88 cents a box, and that the rate from Florida to New York, only about one-third of the distance, is 65 cents a box. These facts suggest the importance of the citrus fruit growers of Florida, Louisiana and Texas and the railroad interests of the South being alert to the situation.

LIVES TO REAP REWARD.

After 30 years of arduous but successful labor in Southern development, S. L. Cary of Jennings, La., is still, at the age of 85 years, an enthusiastic worker in the midst of the success which he has wrought. One of the finest tributes to a living worker for the South by another worker is paid on another page of this week's issue of the MANUFACTURERS RECORD by Capt. J. F. Merry of Manchester, Iowa, to S. L. Cary, the founder of Jennings and the pioneer of the movement which has made Louisiana in less than 30 years the center of our rice production. Since 1883 the rice industry of Louisiana has been transformed from a few sacks of the grain, harvested with a sickle and threshed with a club, to a great annual harvest of 11,000,000 or 12,000,000 bushels, gathered by mechanical twine binders, threshed by steam from acres irrigated by miles of canals and many deep wells, and carried to immense mills and warehouses, representing an investment of about \$75,000,000 of Northern capital, yielding \$12,000,000 or \$15,000,000 annually. The direct connection with this notable advance of Mr. Cary, who traveled in 1883 from Iowa to Louisiana on a railroad pass, is clearly traced by Captain Merry, and it makes a story of thrilling interest, inspiring to men of the coming generation.

HOW TO GET BUSINESS.

The Cassels Cement Gravel Co. of Augusta, Ga., writing under date of July 3 to the MANUFACTURERS RECORD in regard to the advertisement which that company has been carrying in the *Daily Bulletin*, says:

"While carrying a small space in your *Daily Bulletin*, we received inquiries from contractors not only all over the South, but from Northern and Western contractors doing business in the South. The results were exceedingly gratifying, and we congratulate you on getting out such an unique and useful publication."

Building Coal Barges.

R. E. Vennum, manager of transportation, West Kentucky Coal Co., Paducah, Ky., writes to the MANUFACTURERS RECORD:

"We expect to build at least 25 barges this year, the dimensions of which will be 135 feet long by 26 feet wide by 8 feet deep. We are also improving our barge-building plant; have placed in a band saw which is run by electricity. We also have electric drills, which we will use for boring the holes for the spikes."

Pecans in the Albany District.

The Barnwell Pecan Grove of Bacon, a few miles from Albany, has been sold to a group of capitalists for \$200,000, according to Secretary Eugene B. Adams of the Albany Chamber of Commerce. The groves embrace 600 acres of land, and were among the first of any size in the Albany district to be developed. During the past few years 50,000 acres have been planted in pecans in the district.

Crest of the Blue Ridge Highway.

By JOSEPH HYDE PRATT, State Geologist of North Carolina.

There is now being constructed in Western North Carolina a highway which will when completed rival all other highways in this country for rugged location and scenic beauty, and it is the greatest undertaking in highway construction that has been started in Eastern United States. This highway is known as the "Crest of the Blue Ridge Highway," for the reason that it has been located near the summit of the Blue Ridge, which it follows from near the Virginia line to Toe River Gap, a distance of about 150 miles, where it leaves the Blue Ridge proper and penetrates through the wild, rugged and picturesque Black and Craggy mountains to Asheville.

Although roads built primarily for scenic purposes and for the use of the tourist are common in many countries of Europe, they have not been built to any great extent in this country, and none thus far have been constructed in the Southern Appalachian region. The scenic beauty of this highway will be its most noteworthy single feature, for the section of the Southern Appalachian mountains through which the "Crest of the Blue Ridge Highway" will pass contains the loftiest peaks east of the Rocky Mountains, with mountain slopes covered with a more varied fauna and flora than is found in any other section of this country.

The grandeur of the scenery along this highway, comprising, as it will, extensive vistas into the Piedmont region, nearer views of valleys, and mountain tops, and ridges, with here and there a most attractive waterfall, and the highway crossing and passing streams of clear crystal water and penetrating the dense evergreen forests of balsam and spruce, whose deep shade always casts a feeling of awe over the traveler as he passes through them, will make a ride over this highway one never to be forgotten. When the plan for the highway has been worked out in its entirety the highway will extend from Marion, Va., to Tallulah Falls, Ga.

The accompanying map will give an idea of its location.

The portion of the highway that is attracting universal attention is that from Boone, Watauga county, to Asheville, Buncombe county, a distance of 134 miles, and represents an immense undertaking in road building. The following table will give an idea of the altitude maintained by this highway:

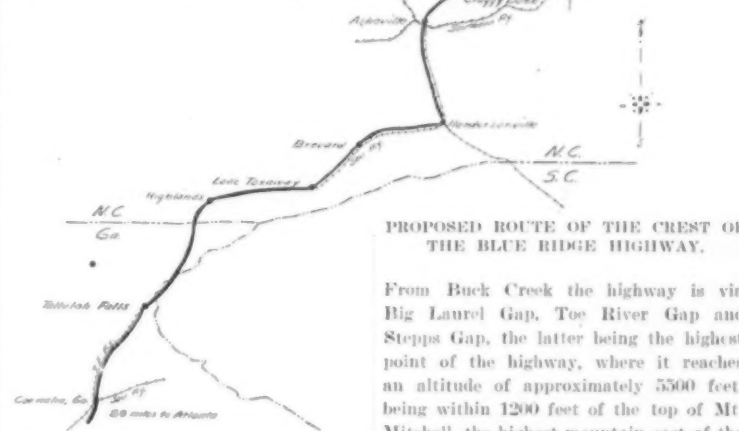
Maximum and Average Altitudes of Sections of "Crest of the Blue Ridge Highway" Between Boone and Asheville.

Section.	Distance, Miles.	Max. Altitude, feet.	Avg. Altitude, feet.
Boone to Blowing Rock.....	10	3500	3360
Blowing Rock to Linville.....	22	4000	3800
Linville to Altapass.....	25.5	4100	3700
Altapass to Little Switzerland.....	6.5	3300	3000
Little Switzerland to Buck Creek Gap.....	12.5	3800	3500
Buck Creek Gap to Steppes Gap.....	22	6200	4500
Steppes Gap to Craggy Fields.....	13	6200	5700
Craggy Fields to Asheville.....	22.5	5500	3500

A detailed description of the route of the "Crest of the Blue Ridge Highway" is given below:

From Boone to Linville, a distance of 32 miles, the road is well graded and open for automobile traffic. The route is via Blowing Rock, a noted resort of this section of the Southern Appalachian region, which is situated on a ridge at an altitude of about 3600 feet. The views from this ridge into the deep valley on the headwaters of John's River are equal to, though very different from, the views into

the canyons of the mountains of western United States. From Blowing Rock to Linville the route is over the celebrated Yonahlossee road. This road was the first good road built in the mountains of North Carolina, and was constructed by Mr. S. T. Kelsey. A graded road 22 miles long connects Blowing Rock with Lenoir, Caldwell county. Linville is a unique mountain resort in the upper valley of the Linville River, which combines a most delightfully cool climate with 70-odd miles of stream trout fishing, a large lake for lake fishing and a golf course of considerable renown. Esseola inn and cottages are equal to any in the Southern Appalachian Mountains. From Linville to within a few miles of Linville Falls the road is now partly completed, and can be used by automobiles, although there has been no surfacing material used on the road and it gets very heavy in wet weather. The road passes Altamont, Grassland and Pineola. At Pineola and Linville Falls there are well-equipped inns that are open for the accommodation of tourists during the summer season. At Linville Falls the



PROPOSED ROUTE OF THE CREST OF THE BLUE RIDGE HIGHWAY.

From Buck Creek the highway is via Big Laurel Gap, Toe River Gap and Steppes Gap, the latter being the highest point of the highway, where it reaches an altitude of approximately 5500 feet, being within 1200 feet of the top of Mt. Mitchell, the highest mountain east of the Rockies, with an elevation of 6711 feet. At Steppes Gap the highway will be in the heart of the Black Mountains, and from there to Bull's Gap, a distance of 26 miles, the highway crosses some of the most rugged mountains in the whole region. The highway passes around Mt. Gibbs, Clingmans Peak, Potato Knob, and along the east side of Black Stock Knob. Here for some distance Mt. Mitchell and the other peaks of the Black Mountains



ON A CLIFF, ONE MILE WEST OF BALSAM GAP ON ROUTE OF HIGHWAY.

summit of the Blue Ridge, and will open up to the traveler some beautiful scenes in the Piedmont Valley via Brushy Creek Gap, Humpback Mountains, Hog Gap and Rose Creek Ridge and McKinney Gap,

are in full view. From Black Stock to Balsam Gap, which represents the end of the Black Mountain range, the highway is along a ridge which is the dividing line between the Asheville watershed on the

which is within two miles of Altapass, the highest point on the Carolina, Clinchfield & Ohio Railway. Leaving McKinney Gap the highway will follow on the southern and eastern side of the Blue Ridge to Gillespie Gap, from which point there is a good road to Little Switzerland, a new resort that has been started within the past few years. Leaving Little Switzerland, the highway will pass through Bear Wallow Gap, Gooch Gap, and then cross ridges and around peaks to Blue Ridge Meadows, and then practically with the crest of the ridge to Buck Creek Gap,

vest, which contains an area of approximately 10,000 acres, and the celebrated Murchison boundary on the east, which contains 13,000 acres of magnificent virgin forest. From Balsam Gap the road follows Peach Orchard Ridge, climbing up to the summit of Bull Head Ridge, a rise of 700 feet. There is then an easy grade down to the gap between the Dome and Bull Head, and thence on the southwest side of Craggy Pinnacle through Craggy Gap to Craggy Fields, which has already been used a great deal by camping parties and is a magnificent site for a hotel. From Craggy Fields the highway will follow on the western side of Craggy Knob, through Carter's fields, and along the south side of Snow Ball Mountain to Potato Gap. Then, crossing ridges and passing in and out of coves, the highway passes on the west and north sides of Lane's Pinnacle, Courthouse Knob and Richland Knob to Bull Gap. A short distance out of Bull Gap is Rattlesnake Lodge, the summer home of Dr. C. P. Ambler of Asheville. From Bull Gap to Sunset Mountain the highway follows an old tram road which only needs revision for about two and one-half miles. From Sunset Mountain to Asheville, a distance of five miles, the highway has recently been completed by Mr. E. W. Grove of Asheville and St. Louis. It is of macadam, well graded, and its ever-changing views are a constant source of pleasure to the traveler.

There is one link of the highway between Buck Creek Gap and Steeps Gap that has not been located, but this link is now being surveyed. Mr. T. F. Hickersen, professor of highway engineering in the University of North Carolina, is in charge of the surveying party, which consists of Albright Chambers and Reuben Rawls of Asheville, S. E. Barbour of Clayton, N. S. Mullican of Winston-Salem, George Strong of Raleigh, Collier Cobb, Jr., of Chapel Hill, Malcolm Oates of Charlotte and B. L. Field of Greensboro. With the exception of the Asheville boys, they are all university students. Their first camp is at Big Laurel Gap and the second will be at Toe River Gap. It will take about six weeks to finish this survey. The party is supplied with the following instruments: Aneroid barometer, pedometer, Abney hand level, Gurley transit and engineer's level. Topographic maps made by the United States Geological Survey are used to good advantage in making the preliminary survey. The first step in the preliminary survey is a walking trip over a few miles of the territory for the purpose of obtaining a clear idea of the topography with reference to the selection of the best route. Barometer readings are taken at controlling points, such as low gaps and summits of ridges. Hand-level readings are taken here and there to determine roughly the grades between various points. The next step is the exact location, by means of the hand level, of the route outlined during the reconnaissance. Several trial lines sometimes have to be run before the most feasible route can be determined. Where solid rock cliffs with almost vertical faces are encountered it is necessary either to raise or lower the grade line in order to dodge them. In some places narrow ledges of solid rock cannot be avoided, and in constructing the road considerable blasting will be necessary for short distances. Loops are resorted to as seldom as possible, and are always located so that the turn is made on comparatively flat ground where excessive excavation will not be required.

When the most suitable route is finally established, after due consideration has been given to directness, economy of construction and scenic advantages, the transit, level and cross-section parties

come along with two or three axemen and make an accurate instrumental survey of the located line, so that a map showing the plan, longitudinal profile and transverse profiles at intervals of 100 feet can be drawn, from which an estimate of the cost can be made. Notes are kept of stream crossings, property lines, character of the soil, amount of rock and extent of forest and open ground.

In the location of the "Crest of the Blue Ridge Highway" there is no grade over $4\frac{1}{2}$ per cent.; that is, $4\frac{1}{2}$ feet rise in a 100 feet or 238 feet rise in a mile. The width of the road will be 24 feet wherever possible, but in some instances where solid rock is encountered it will be some narrower. The road will be surfaced as far as possible with gravel or sand-clay, although in some places it will have to be of macadam.

The counties through which this highway passes from Boone to Asheville are not able to build it themselves, and therefore the Appalachian Highway Co. was organized to survey and construct the "Crest of the Blue Ridge Highway." On account of the pioneer work of this company in developing the Southern Appalachian region a most liberal charter was granted them by the General Assembly of North Carolina of 1911. This charter permits the company to build and operate the "Crest of the Blue Ridge Highway" as a toll road, and to build and operate hotels and inns along the line of this highway, and deal in real estate, and develop and operate water-powers. This company has its central office in Asheville, and the following are its board of directors: Joseph Hyde Pratt, Chapel Hill, N. C., president; George L. McKay, Rutherfordton, N. C., secretary; Mark W. Potter, New York city; E. H. Jennings, Pittsburgh; Hugh MacRae, Wilmington, N. C.; Dr. C. P. Ambler, Asheville; Frank R. Hewitt, Asheville.

The company will build the road link by link in such a way that each link will become available for travel just as soon as completed. The first link that is to be constructed is from Altapass to Linville, and work has already been begun on this. The construction is under the supervision of George L. McKay as resident manager, and J. B. Clingman as resident road engineer. A crew of about 30 men are now at work upon this section of the highway, and it is hoped to increase this force to 100 or more men soon after the first of July. This section of the highway passes over Humpback Mountain, which is to be developed as an up-to-date summer resort. It is expected that this link of the highway will be completed this year, and if possible a second link from Altapass to Little Switzerland will also be constructed. Next year the company expects to be able to build the link from Little Switzerland to Laurel Gap, and perhaps to Steeps Gap, which will bring a good road to within 1000 feet of the top of Mt. Mitchell.

The inauguration of the construction of the highway by the company was on June 14, when the first furrow was turned and the first shovelful of dirt was thrown on the grade by Joseph Hyde Pratt, the president. The following gentlemen were present and took part in the ceremony, each in turn throwing a shovelful of dirt from the grade: T. A. Horsfield of Morganton; J. E. Shepardon, Johnson City, Tenn.; John V. Cox, Spruce Pine; D. J. McKinney, Spruce Pine; L. D. Pittman, E. S. Wiseman, H. P. Dayton, Brown Chapman, Conney McKinney, M. M. McKinney, L. J. Wiseman, O. G. Wiseman, J. P. Willis, John McKinney, I. W. Davenport, C. T. Cressawn, A. G. Wiseman, Green Ledford of Altapass, and George L. McKay, secretary of the company.

INCREASE IN FUEL BRIQUETS.

Outlook Promising for a Substantial Production.

Considerable progress has been made in the development of fuel briquetting in the United States during the last two years, according to Edward W. Parker in a statement just made public by the United States Geological Survey. This country, however, still lags far behind some of the European countries, particularly Germany, in this line of industrial activity. In 1909 the production of fuel briquets in the United States was 139,661 short tons, valued at \$652,697, an increase of nearly 55 per cent. in quantity over 1908. In 1911 the production amounted to 212,443 short tons, valued at \$769,721, the increase in two years amounting to 72,782 short tons, or 52 per cent., in quantity, and to \$317,024, or 70 per cent., in value.

In Mr. Parker's opinion, more attention should be given to this industry, as on it depends to a considerable degree the utilization of some grades of fuel which are now wasted or sold at less than the actual cost of production. The reprehensible practice of shooting bituminous coal "off the solid"—a practice notably prevalent in the fields of non-coking coal in the Mississippi Valley—produces an inordinate proportion of slack, which might be made into briquets.

The principal factor operating against the more rapid development of fuel briquetting in the fields of non-coking coal in the Middle West is the low price of the raw fuel with which the briquet has to compete. The average price for fuel in the northern Middle States in 1911 ranged from about \$1.10 to about \$1.75. The cost of manufacturing briquets, exclusive of the cost of the raw material, is about \$1 a ton, and although briquets possess undoubted advantage for domestic use over raw coal, householders have to be educated to the fact that the higher cost of the briquets is more than offset by their desirability. In Germany the briquetting industry has made extraordinary progress, the production in 1910 being 16,668,605 short tons, and in 1911, 18,554,020 tons.

Some probability of more substantial development of briquetting in the Eastern States is indicated by the recent advance of 25 cents a ton on the domestic sizes of anthracite and the fact that there is little possibility of any future reduction in the prices of this fuel. In fact, further advances are more to be expected, in view of the rumored increase in royalty to be demanded by the owners of coal lands in the anthracite region.

It seems reasonable, therefore, to suggest that the utilization of the small sizes by manufacturing them into briquets, on which a profit could be made, might be more rational than selling these small sizes, as is now done, for less than the cost of production. The available quantity of raw material of this grade for briquetting is enormous. In 1911 the shipments of anthracite smaller than pea coal amounted to over 20,000,000 long tons, of which 85 per cent. was obtained in the preparation of freshly-mined coal. This 20,000,000 tons was worth not to exceed \$30,000,000, but if manufactured into briquets of egg and stove size at a cost of about \$25,000,000 it would have been worth \$70,000,000. In other words, the outlay of an estimated \$25,000,000, mostly in labor, would have brought a profit of 60 per cent. The enormous culm banks of the anthracite region, monuments of earlier methods, contain millions of tons of briquettable coal.

In 1909 the Geological Survey suggested that greater inducement to the investment of capital in briquetting could

be offered if investors were assured of a regular supply of suitable binding material. The manufacture of coke in by-product ovens, which yields coal-tar pitch that makes an excellent binder for briquets, has shown notable progress in the last two or three years, and as the by-product oven is continuing to supplant the beehive oven at an increasing rate, the supply of coal-tar pitch at a reasonably low cost should be assured.

In addition to the slack from bituminous, sub-bituminous and semi-anthracite non-coking coal and small sizes of anthracite, three other kinds of raw material for briquetted fuel are available, namely, lignite, peat and coke dust.

The Los Angeles Gas & Electric Corporation of Los Angeles, Cal., operates a briquetting plant for utilizing the carbon obtained as a by-product in the manufacture of illuminating gas from crude petroleum. The briquets, or "boulets," make excellent domestic fuel.

The briquetting industry, according to Mr. Parker, has been retarded by attempts to exploit secret binders and processes for which extraordinary and impossible merits are claimed. The pathway of briquetting development is strewn with wrecks that are due to this cause. There is no reason for secrecy in connection with the constituents of patented binders. The field is so large that there is room for everyone to develop the industry in paths laid out by the experience of European countries.

Twenty plants in the United States manufactured compressed fuel in 1911, an increase of four over 1909, but four of the 20 plants in 1911 were operated only in an experimental way or for demonstrating purposes. Of the commercial plants, eight used anthracite as a raw material, two used bituminous coal, two used semi-anthracite, one used refuse from oil-gas works, one used peat, and two used mixed material. The manufacturers place their products on the market under special names, such as "boulets," "eggettes," "carbonets," "coalettes," and "patent fuel."

Wants an Ice Plant.

Montezuma, Ga., July 2.

Editor *Manufacturers Record*:

Montezuma is building a ginning plant with capacity for 100 bales of cotton a day. There is an opening here for a large ice factory to make ice from pure artesian water. There is also an opening for an up-to-date livery stable.

W. T. CHRISTOPHER.

Opportunity for Right Man.

An iron-making company located in the South is advertising in this issue of the *MANUFACTURERS RECORD* for an auditor who must also, in case of need, have capacity for management; one having had some experience with blast furnace practice being needed.

The Commercial Club of White county, Tennessee, has been organized with 100 members and with A. F. Richards, president, and S. J. Jackson, secretary. The club will interest itself in promoting agriculture and manufacturing in the county turning upon the development of hydroelectric power at the Great Falls of Caney Fork River.

Julius Funk of Illinois, a member of the widely-known family of corn growers who for two years has been interested in land reclamation in Louisiana, has, it is announced, just bought from the Louisiana Meadows Co. a tract of 10,000 acres of land near Houma for about \$80,000.

A Persistent Pioneer in Southern Progress.

By CAPT. J. F. MERRY, Manchester, Iowa.

It is interesting to note the achievements of any one individual, no matter what are the lines of work in which he or she may be engaged. A great inventor attracts attention and serves his generation well. A great educator commands the admiration of all intelligent and well-thinking people. But the man who by his genius in the use of the pen, by his enthusiasm, personality and perseverance can in a few years convert a great sparsely-inhabited prairie into a densely populated and immensely rich agricultural and industrial parish is worthy of special mention among the successful developers of the South. Such an one is S. L. Cary, the founder of Jennings, La., and the subject of this article.

"Imperial" Calcasieu parish, as it has been known to the people of Louisiana since S. L. Cary turned the tide of immigration from the Northwest to that parish, has an area of 3600 square miles, larger than some of the States, and even larger in extent than Delaware and Rhode Island combined. It covered so much territory with such industrial and agricultural possibilities that only recently it was divided into four parishes, each one of which now has many times the population of Calcasieu parish in 1880. What has brought about this great change? Who was the prime mover in the settlement of a parish with only 2000 population in 1880 to 62,000 in 1912? Who, in season and out of season, proclaimed from the housetops and elsewhere the immeasurable undeveloped resources of Calcasieu parish? Who is most responsible for changing the Creole pony industry of a parish in the hands of a few Acadian families in 1880 to a great industry that now furnishes more than nine-tenths of the domestic rice of the United States and employs more than 20,000 people, nearly all of whom are from the States of Illinois and Iowa? Who was foremost in the development of the rice industry from a few sacks in 1883, harvested with a sickle and threshed with a club, to a great annual harvest with any number of twine binders, steam threshing machines, miles of canals, any number of deep wells, immense rice mills and warehouses, involving an investment of Northern capital of not less than \$75,000,000, the returns from which are \$20,000,000 annually? He was none other than S. L. Cary.

This remarkable evolution in 30 years from annual returns of only \$50,000 from the sale of wild ponies to approximately \$20,000,000 from the sale of a staple food product is one of many great and important changes now taking place throughout the South. But we doubt it will be found upon investigation that in nearly every parish or county some master mind like S. L. Cary of Calcasieu has led the development procession. In 1880 the assessment of Calcasieu parish was less than \$2,000,000. In 1912 it is \$38,000,000. The prairies of this parish had for years been open for settlement and the lands advertised at Government prices. Homesteads and tree claims were abundant throughout Southwest Louisiana, but none of these attractions was sufficient of itself to turn the tide of immigration that from the East and middle West was pouring into the West and Northwest. Someone who believed in the future of Calcasieu parish and who could intelligently talk and write of the faith that was in him, and who knew how to reach the farmers of the more congested States, must be found. In S. L. Cary of Iowa, Calcasieu parish,

Louisiana, had an advocate at least the equal of any adopted citizen of the South, and the story of his operations in Calcasieu parish reads like a romance.

The writer for many years, beginning with 1880, was connected with the passenger department of the Illinois Central Railroad Co., and became somewhat familiar with agricultural and industrial conditions in Louisiana, and the great need of more white settlers who knew how to till the soil and how to harvest and market farm products. Nor were we blind to the fact that more produce meant more traffic for the railroads. It was, therefore, quite natural that when, during the summer of 1882, S. L. Cary wrote a letter making application for transportation from Dubuque, Iowa, to New Orleans, La., and return that we became sufficiently interested to inquire just what he had in mind. Often since then have we wished his second letter had been preserved, as it would now be considered as a valuable relic. The substance of the letter was as follows:

"I have been unfortunate in my mercantile venture in Howard county, Iowa. Indeed, I have passed through five financial panics and I am moneyless, but, although 56 years of age, I still have much of the Cary in me, and all I ask is an opportunity to help build up some section of our great country. I have been reading of the prairie country in Southwest Louisiana and the large acreage of land there subject to homestead and tree claim. I want to visit that country, but have not money enough to buy my ticket and pay the other necessary expenses. Don't you think the Illinois Central Railroad Co. can afford to issue me a pass, Dubuque to New Orleans and return? If this can be done I will see that the company some time is paid fourfold."

In those days railroad officials used their best judgment in the issuance of free transportation, and the enthusiastic request of my old friend Cary appealed to me as deserving a favorable recognition. I replied that when he was ready to make the trip to advise, and I would mail him the transportation. In March, 1883, Mr. Cary accompanied us to New Orleans, he going west of there 183 miles on what is now the main line of the Southern Pacific Railroad to a flag station known as Jennings, Louisiana, with no station agent and only two families in the settlement. Mr. Cary at once foresaw great possibilities in the prairie country adjacent to Jennings, and as soon as he could reach the land office filed on a homestead of 160 acres and a tree claim of same size. He then visited the officials of the Southern Pacific Railroad, advised them of his convictions concerning the future of Calcasieu parish, of his two claims adjacent to Jennings, and immediately contracted with the company for the agency of the Jennings flag station. As may be surmised, there was little business for an agent at a point where as yet were but two families in the settlement. Mr. Cary, now a full-fledged railroad man and a resident of the Pelican State, at once made a trip to Northern Illinois and Northern Iowa and to his friends presented the claim and possibilities of Calcasieu parish in such an earnest and enthusiastic manner that several families who had planned to immigrate to Nebraska, the Dakotas and other Western States decided to first investigate the prairies of Louisiana. The hitherto unknown fact that Southwest Louisiana had millions of acres of prairie land belonging

to the Government or to the State soon was made known through the Northern press, and families with little money who were looking for homesteads and capitalists who were ready to purchase lands at \$1.25 per acre simply deluged Mr. Cary with letters concerning Calcasieu parish until he could hardly sleep or eat in his desire to promptly answer his correspondence and add another Northern family or another financial friend to this new Eldorado. For 14 consecutive years Mr. Cary came North in summer, and for two months each season from a desk in the writer's office he sent out daily sacks full of mail in the form of letters and circulars describing, as only Cary could, the hidden resources of a great country. His optimistic articles were found in many Northern newspapers, and thousands of people who scarcely knew Southwest Louisiana was on the map were fully enlightened by reading what Cary had to say about it.

The Acadians said of him: "Cary will be President or be hung, and we think he will be hung." To them it was incredible that Calcasieu parish could ever be anything than a great ranch over which their ponies could roam at will. Among the thousands of excellent Northern people who were attracted to Southwest Louisiana through Cary's writings and personal efforts, the most notable was the lamented Prof. S. A. Knapp, who at once identified himself with the developments of the South and by his intelligence and progressive methods so won the hearts of Southern people that at his death Southern papers everywhere referred to it as an irreparable loss the South had sustained. The modern methods of agriculture introduced by Professor Knapp and urged upon the farmers of the South have already been of immense value, and their fruits will be more apparent as they become generally adopted.

Mr. Cary was for years president of the Iowa colony of Calcasieu parish, and now, at the age of 85, he still has his residence at Jennings, of which he was the first settler, and that has grown to be a city of 4000 or more people, with 12 churches, excellent schools, Carnegie Library, opera-house, Elks' Home, country club, 20 miles of concrete sidewalks, a \$75,000 hotel, rice mills, machine shops, ice plant and every branch of business usually carried on in an enterprising city of its size. For years Mr. Cary was the only immigration agent employed by the Southern Pacific Railroad Co., and our knowledge of his work prompts us to say that no railroad company ever had a more efficient or untiring representative in the immigration or any other department than the subject of this article, who for three decades has sung and is still singing the praises of Southwest Louisiana.

In 1883 S. L. Cary was the first settler in Jennings. He was also the first express agent and mail carrier and the author of the first circular advertising Calcasieu parish. In 1894 all Government and State lands within the parish had been disposed of, and the price of lands advanced from \$1.25 to \$5 and \$10 per acre. In 1896 Mr. H. L. Cary, son of S. L. Cary, erected the first rice mill at Jennings. In 1899 immigration from Illinois and Iowa to Southwest Louisiana was quite like that of 1860 from York State and Ohio to Illinois and Iowa. Every train brought new settlers who in the future were to have a part in the commercial, industrial, agricultural and educational development of that country. The fine exhibit of agricultural products from Louisiana made by Mr. Cary at the Omaha Exposition had much to do with creating a favorable interest in that particular section of the South.

Mr. Cary lays no claim to having discovered oil at or near Jennings, but on the 20th of September, 1900, oil was discovered and the industry so developed that in 1903 7,500,000 barrels of oil were stored in earthen reservoirs near Jennings. The population of Jennings is growing at a healthy rate. The homestead and tree claim of S. L. Cary has been platted, streets laid out, and, with the exception of 300 or 400 lots still owned by Mr. Cary, it is covered with comfortable and many of them handsome residences. And the debt contracted by Mr. Cary with the Illinois Central Railroad Co. in 1882 has long since been paid by the routing of thousands of homeseekers and settlers and the shipments of millions of tons of freight over that popular route between the North and the South. A half million dollars and more has gone into the treasury of the Illinois Central Railroad Co. within the past 30 years as a direct result of S. L. Cary's efforts in Southwest Louisiana. During the year 1905 more than 300 of Mr. and Mrs. H. L. Cary's friends joined with them in celebrating their golden wedding anniversary and expressing their sincere appreciation of all they had done for the South in general and Calcasieu parish in particular.

Possibly some reader of this article will wonder what became of the native Acadian families with this great influx of Northern people. To them it was indeed a surprise. Their ponies, with no shelter but the blue sky, and no feed, summer or winter, but such as the prairie furnished, enabled them to have a number of these annually for market. Their razor-back hogs were compelled to literally obey the injunction "root hog or die," but they furnished a fine quality of bacon and side pork. Their poultry, that nested anywhere and everywhere, and at night perched on the limbs of the pepper trees, furnished fresh eggs at all seasons of the year. Their gardens produced the varieties of vegetables they enjoyed, and as a rule they were a happy and contented people and the new settlers were not there on their invitation. But they soon caught the spirit of progress, adopted modern methods of agriculture, sent their children to school, and many of them are now counted among Calcasieu parish's best families.

But what of the many Northern families that Cary persuaded to locate in Southwest Louisiana. Not all of them have succeeded, and this could not be expected this side of Paradise; but many of them have grown rich, have fine homes and comfortable environments. The mild climate of Louisiana in contrast with the snow and ice of the North has wooed them, and it is a rare thing that one of these settlers returns to the Northern States, except to visit old friends or to make purchases of machinery for the rice industry that has grown to such enormous proportions in Calcasieu parish.

But what of this enthusiastic pioneer? Has he prospered and reaped the reward due all who courageously work for the development of the country and the betterment of humanity? We are not advised of the amount of Mr. Cary's possessions, but with his 1000 acres of rice lands and his holdings at Jennings to enumerate, his present belongings would require five, probably six figures. The object of this article is not to advertise Louisiana, but to do honor to the Carys, who throughout the South are patriotically and persistently bending every energy to the material development of that particular section of the country of which the MANUFACTURERS RECORD is its ablest and strongest exponent.

PRECOOLING FARM PRODUCTS.

System Reinforcing Transportation in Refrigerator Cars.

[Special Cor. Manufacturers Record.]

Chicago, Ill., July 3.

The leisurely growth of an innovation, no matter how advantageous it is demonstrated to be, is well illustrated in the case of the precooling system of preparing perishable products for shipment to market. Although the principle was established by United States Agricultural Department experimentation more than a dozen years ago, and a perfected system worked out through the inventions of A. R. Sprague, formerly president of the California Fruit Exchange, some seven or eight years ago, the adoption of the system has so far been confined almost entirely to the fruit growers of California, although to no part of the country or the world would it be of greater advantage than to all the States of the South.

Through the initiative of B. F. Yoakum of the Frisco Railroad, an empire builder of the Southwest, the new city of San Benito, down on the Brownsville branch of the Frisco system in Southwest Texas, has become a pioneer in the South in installing the precooling system, with such immediate and palpable benefits that a shipment of snap beans was sold at Boston, Mass., at the rate of \$2100 a carload.

Within the memory of the people of middle age today only the very wealthy or improvident thought of fresh fruits or vegetables "out of season" in any locality. Now hardly a workingman's family but what indulges in fruits and vegetables at all times of the year that have come from the four corners of the continent, and even beyond the seas. This has come about through the refrigerator car. What won't be the condition when, through precooling, the crispest of vegetables, the ripest and most delicious of berries, peaches, apples, grapes, melons, pineapples, and everything that grows in the garden, orchard or vineyard, even 3000 miles away from one, may be had almost the whole year through from the dealer at the corner?

Without the refrigerator car, to be sure, we would be compelled to rely on canned things and dried things in out-of-season months, as our forefathers did. But even at that there is no comparison between the stuff generally bought today at market and the things we used to get at home or on a visit to Aunt Sally's in the country. No one who has never eaten a pineapple cut fresh from the plant has any idea what nectar a real pineapple contains, and the city man who never plucked strawberries right off the vine in the cool of the morning, with the dew still clinging to them, can appreciate the sage's apostrophe to the strawberry—"doubtless nature could have grown a more delicious berry, but undoubtedly nature never did."

The faults of the refrigerator car were early recognized, of course, for it was necessary to pick all kinds of perishable products in an unripe state, so they might reach market at all. They ripened as best they could in transit and after arrival, and often proved insipid or sourly unripe when served. Vegetables lost their crispness and their charm, as well as much of their wholesomeness, and there was always trouble in the camps of shipper, dealer and consumer.

The difficulty was, and is, that in the ordinary process of icing a car of fruit or vegetables it required from two to three or four days to get the heat out of the products and reach a uniform temperature that arrested decay or fermentation. As a matter of fact, decay setting in from



CAMERON COUNTY COURTHOUSE AND JAIL, BROWNSVILLE, TEX.

To be erected for Cameron County Commissioners; three stories; about 100x100 feet; fireproof construction; faced with pressed brick; terra-cotta trimmings; marble wainscoting in corridors; tile floors; oak trim; steam heat; electric lighting; cost about \$175,000; architect, Atlee B. Ayres, San Antonio; contractor, Standard Construction Co.

the moment the article is picked, the chemical action that occurred resulted in an increased temperature within the car of fruit or produce, until after the chill of refrigeration had permeated the whole mass. Under these circumstances, wilt, blight and decay were inevitable, and even if the shipment reached its destination in marketable condition, its flavor was hopelessly impaired.

Acting at the instance of the California fruit growers, the United States Department of Agriculture made many experiments and gave the matter thorough investigation. It was determined that the proper solution of the problem was prior refrigeration and the reduction in the temperature of the car at the earliest possible moment after loading.

Many methods were devised, such as passing the crates of fruit and vegetables through a stream of cold air for some time previous to packing them in the car, and in injecting a current of cold air into the car after it was loaded. None of these methods was more than partially successful, and the net results were only a slight gain over the old manner of shipping in cars iced after loading.

To Mr. Sprague is credit due for hitting on a scientific solution of the difficulty. Finding that the cold air, when freely circulated throughout a car, passed out without having permeated the interior of the packages and the carload, he devised a system by which the warm air of the car is first removed by vacuum suction. Then cold, dry air is pumped into the car, and after a time it, too, is taken out by suction. At intervals of 15 minutes or so this process is repeated until finally every crevice and cranny in and around the packages is filled with air but a trifle above freezing temperature, all the gases germinated by the heated mass have been eliminated, the fruit or truck is thoroughly chilled, and with ice refrigeration as in the old way the car is ready for a journey of 3000 miles, and even after two or three weeks will arrive with its contents in as perfect a condition as when they began the journey. Furthermore, not having deteriorated, they can be put in cold storage and kept for long periods in the same fresh condition as when they were shipped.

The illustration of the snap beans that went from San Benito to Boston, some 2500 miles, and reached there in such fine condition that they sold for a price to the growers of \$3.50 per bushel, indicates the almost illimitable field that opens up for the truck farmers and fruit growers of every part of the south. Strawberries, which are nearly all flavor, anyhow, can with this system be picked in their delicious ripeness and put on the table of the

far Northern consumer in their pristine freshness. Starting with the Florida and Texas crops of late December, the strawberry season can be continued till the last berries of Northern Michigan are marketed in July, for the precooling system will find as great opportunities in the handling of the later fruits and vegetables of the Northern United States and Canada as in those of the South in the earlier months of the year.

Everything that grows out of the ground for the food of man, also meats, poultry, eggs, milk, butter and cheese, will be rendered fresher and sweeter, more palatable and more wholesome by being immediately refrigerated by this system, which is over with in from two to four hours' time, instead of the two to four days required for cooling under the refrigerator car plan.

The patents of Mr. Sprague are owned by the Intermittent Vacuum Precooling Co. of Chicago, of which S. A. Roy is president. The San Benito plant is owned by the Intermittent Vacuum Precooling Co. of Texas. Its officers are B. W. Redfern, San Benito, president; S. A. Roy, Chicago, vice-president; O. H. Nance, San Benito, secretary and treasurer. The plant, which is of brick and concrete construction, cost \$82,000. It has a capacity of six cars at a time, or 36 cars a day. As occasion arises this capacity can be increased by additions to the original.

This is the third plant in the United States, the other two being in California.

The plan of operation is to establish auxiliary plants on railroads at points where an important fruit and trucking industry may be built up. The railroads have a special interest in the establishment of such plants, because of the greater tonnage and increased business through their use, and because the shippers are guaranteed wider markets and more attractive returns. Plans are well under way for the establishment of a number of these plants, not only at various Southern points, but in Canada as well.

ALBERT PHENIX.

SANFORD'S FERTILE ACRES.

Yield Nearly \$1,500,000 to Growers This Season.

[Special Cor. Manufacturers Record.]

Commercial Club.

Sanford, Fla., July 6.

The Sanford season of 1911-1912 is now coming to a close, and while we have in times passed made more money on individual crops, there has been few seasons since the inception of the vegetable-growing business here that has made as good an average yield as the past season. A summary of total crop operations shows

that the gross income to the farmers, less freight paid to the railways and express companies, reaches \$1,463,900. During the season there were 112 local buyers on the ground, who purchase in small quantities for spot cash and ship to grocers direct over the Southern States. They made an average of \$1500 each, or a total of \$168,000. There was also a number of dealers who purchase in car lots and ship direct to parent houses in large cities, that, in turn, distribute the products to isolated places. No season in the history of this section has there been so many buyers in the field with their check-books in hand ready to buy and pay for everything offered. The following itemized statement as furnished by the statistical committee of the Sanford Commercial Club covers the various lines of operations in detail:

250,000 crates lettuce.....	\$375,000
420,000 crates celery.....	525,000
25,000 barrels Irish potatoes.....	125,000
*225,000 crates various.....	215,000
110,000 bushels corn.....	99,000
65,000 bushels sweet potatoes.....	65,000
19,000 boxes citrus fruits.....	23,750
2,000 tons of hay.....	24,000
81,000 watermelons.....	12,150

Total.....\$1,463,900

*Includes tomatoes, beans, cucumbers, egg-plants, peppers, beets, turnips, radishes, squash, pumpkins, okra, cabbage, green corn and peas.

Some conception as to the magnitude of the business may be gleaned from the fact that it would require 3118 cars of a uniform capacity of 40,000 pounds each to carry the products to market. There were 2100 acres of tilled land in cultivation during the season just closed, as well as 1400 acres of untilled land.

While these figures may not seem of much moment to the casual reader, still the manner of cultivation in Sanford and the attendant productivity of our acres arouses discussion in agricultural circles throughout the nation. In passing upon the productivity of Sanford soil and the enhancement of our acre value by the introduction of our system of sub-irrigation the Yearbook for 1911 just issued by the Department of Agriculture at Washington sums up our situation in 28 words as follows: "A combination of irrigation and drainage at Sanford, Fla., has transformed worthless lands into those producing crops of celery valued at \$2000 per acre for one crop."

An idea of the interest manifested in Sanford's operations by prospective home-seekers of Florida may be had from the fact that this sentence in the Yearbook has brought 927 inquiries to the Sanford Commercial Club for information as to the manner and cost of installation per acre for Sanford's justly celebrated system of sub-irrigation and drainage.

While the balance for Sanford in its crop operations are always on the right side, it must not be assumed that everyone who comes here makes a success of growing vegetables, for this industry is in no way different from any other effort to corral the dollars, and constant study and work all the time are the groundwork for the building of a small independence from Sanford soil. Without these two elements failure is liable to give the desultory experimenter a jab in the solar plexus that will necessitate a trip back "home" for more funds before a complete recuperation is passed out to him.

The careful conservative man who begins here on a small scale and gradually increases his acreage from year to year is the one that will make a success in Sanford, and we have room for many such settlers.

THOMAS K. BATES, Secretary.

FOR AUGUSTA'S IMPROVEMENT.**Bond Issues for Engineering and Construction Plans.**

[Special Cor. Manufacturers Record.]

Augusta, Ga., July 5.

Ninety per cent. of the registered voters of Augusta voted on June 24 in favor of a \$1,000,000 bond issue to build a levee along the river, of a \$150,000 bond issue for a hospital and of a \$100,000 bond issue for water-works extension and improvements.

Nisbet Wingfield, Augusta's city engineer and commissioner of public works, will have full charge of the construction of the levee and the extension of the water-works system. From his own ideas plans and specifications are being gotten together for the construction of the levee.

The levee, which will be 12 miles in length, will be begun at a high-ground point several miles above the city and will extend to a high point some nine miles below the city. The average height will range from 12 to 20 feet. The river front of Augusta's proposed water shield will be constructed entirely of concrete, and on the shore side there will be a thick bastion, while immediately in front of the city, for a short space, the wall will be constructed entirely of concrete. At the power canal west of the city, at several waste water creeks flowing from the city into the river and a large creek just below the city floodgates will be constructed in the levee to prevent the high water's entrance into the city. Mr. Wingfield states that they will have plans and specifications ready at a very early date for all this work. However, as it is his intention to advertise thoroughly the date for letting all separate contracts, it would be a good idea for those interested to wait until these appear before asking for further information. It is stated that the first construction contracts will be let within three months.

Much preliminary work will have to be done before the actual construction of the levee can be begun. In the first place, much diplomatic work will have to be carried out in securing the right of way along the river. Several manufacturing plants and warehouses, to say nothing of a half a mile of residences, will have to be moved. In addition to raising two railroad bridges and two county bridges 12 feet, the approaches will have to be moved back many feet behind the levee. A long piece of railroad trackage will have to be moved back, and the levee will be constructed where the track is now.

Looking over what has been said, one finds that Augusta has begun to solve an engineering problem of the largest sort, but expert engineers, aside from Mr. Wingfield, who have looked over the situation and plans say that it is the only and logical way to do away with floods that have occurred for 116 years.

In its plans for a hospital system Augusta exhibits a pleasing amount of civic pride. G. Lloyd Procher, one of Augusta's leading architects, has prepared all the plans for the buildings, while Meyer J. Sturm of Chicago has been retained as the consulting architect for the hospital equipment. Situated on a triangular-shaped area of land, in the prettiest part of the city—45 acres in all—the proposed hospital system will consist of five hospital buildings; and a building to house the Medical College of the University of Georgia. This will be remodeled from an old orphan asylum building, and new equipment will be placed in it at the cost of \$50,000, this amount having already been raised by private contributions.

The general plan for the construction of the hospital buildings will be reinforced concrete construction, with brick and stone

exterior and terra-cotta trimmings. All buildings will be heated by steam, lighted by electricity and cleaned with the vacuum cleaning systems. The administration, the white and colored hospital buildings will be equipped with electric elevators. The administration building will be four stories, and located in the center of the group. Its dimensions will be 50x100 feet. The white hospital building will be four stories, and will be 54 feet wide by 230 feet in length. The colored hospital building will be in height four stories, in width 54 feet and in length 202 feet. The power plant, laundry and kitchen will be two stories high, 61 feet wide and 177 feet long. The nurse's home, which will possibly be held up for further consideration before erected, will be two stories high, 31 feet wide by 125 feet long.

As the plans are all ready for figuring just as soon as the City Council passes on some minor details, bids will be advertised for and the contract let within a few weeks.

The third phase of the bond issue is for making several improvements and extending the present water-works system in the city. Mr. Wingfield will have full charge of this work. He is at present working on the plans, and just as soon as the specifications are ready he will call for bids. The work will consist of increasing the present filter system from 7,000,000 gallons of water per day to 9,000,000; grading of a reservoir, which will have a capacity of 75,000,000 gallons of water, and the construction of eight miles of additional water mains.

In carrying out this constructive policy Augusta shows in a striking way the progressive spirit of the South.

ROY G. BOOKER.

LAND RECLAMATION'S INFLUENCE**The Illinois Central Territory's Activity in Trucking.**

[Special Cor. Manufacturers Record.]

New Orleans, La., July 6.

Along the Illinois Central Railroad, at various points in Louisiana and Mississippi, the development of the fruit, berry and trucking industry is one of the notable conspicuous evidences of what can be done for a section where the citizens and the railroads co-operate for achievement. Much has been written of the way the dairy interests have been fostered and built up at Hammond, La., and of the great growth of the strawberry industry in Tangipahoa parish and adjoining sections of cut-over timber lands, for it is an interesting story of how within a few years a strawberry crop of a million dollars annually has been built up from nothing. Great prosperity is thus coming in spots here and there, with the inevitable result that in the course of time the whole Delta country will become one of the greatest, most thickly populated and intensively cultivated fruit and truck growing regions in the world.

Everything occurring here now is merely the pledge of greater things to come. What is going on in the Kenner region, some eight miles out of New Orleans, is an illustration. The main line of the Illinois Central and also the Yazoo & Mississippi Valley branch of that system serve this section, as do also the Frisco and the Louisiana Railway & Navigation Co. lines. It is a standard principle of the Illinois Central management that the first care of a railroad should be to get people on the lands of their territory and get the lands cultivated. They are, therefore, aiding local developers in presenting to possible settlers the advantages of a location here, and are furnishing facilities for the shipment of the produce raised. So successful already have

been the efforts in this district that Kenner products have made a name for themselves in the big markets of the country, and the prestige thus gained is attracting new settlers to the place. This is always the case in development work. One particularly fine shoemaker at Lynn, Mass., established the value of Lynn as a trademark for shoes, with the result that others in ever-increasing numbers to the present day have moved in to share the benefit of this prestige. One good hatmaker established Waterbury, Conn., as a hat center in the same way, and the instances can be almost indefinitely duplicated.

During the past season in one day there was shipped from Kenner 862 barrels of winter vegetables. These shipments went to 46 cities in the North, some going as far west as Butte, Mont., and Denver, Col., as far north as Winnipeg, Canada, and as far east as Portland, Maine. These vegetables brought the Kenner truck growers all the way from \$5.50 to \$14 per barrel on that day in cash, and in three days the shipments from Kenner yielded the truck growers some \$22,000. The average yield to the farmer at Kenner for the past season has been upward of \$500 per acre, and one of two small banks at Kenner shows a business for the season of about \$300,000. In the early part of the season some of the vegetables brought as high as \$21 a barrel, and this money was paid to the growers in cash on delivery to the packing-house in Kenner. The principal vegetables grown are onions, radishes, parsley, beets, carrots, spinach, mustard, turnips, beans, and in the later season cabbage, artichokes and other fancy vegetables. The packers are careful and painstaking in their methods of packing for shipment, and for that reason the truck arrives at its destination in splendid shape and always commands a premium. Aurora, Ill., and local interests are now engaged in the work of greatly increasing the Kenner acreage of truck farms. Under the name of the Kenner Project, this organization is proceeding with the drainage of about 6000 acres of wet lands immediately adjoining the town of Kenner and extending north to Lake Pontchartrain. The development work is to be of the highest character. The first canal, which is now being built, is 45 feet in width and will extend from the L. R. & N. Co.'s railroad north to Lake Pontchartrain. The levees along this canal have an average heights of 6½ feet. They are ample to prevent any overflow from Lake Pontchartrain, and are broad enough on the crown to make splendid driveways. These roads in time will be surfaced with shells. Kenner will only be 20 minutes from the center of New Orleans by automobile. The four railroads that now pass through the town are giving, on monthly commutation tickets, a 10-cent fare to and from New Orleans. The building of a new model road from New Orleans to Kenner will be followed almost immediately by the extension of electric railroad lines to Kenner, and as the development work progresses these lines will be extended further to the west and probably north to Lake Pontchartrain.

The effect on the spirit of a village or city by the inauguration of drainage reclamation projects is interesting because of its instantaneous, almost miraculous operations. Just as drainage immediately adds three or four fold to the market value of alluvial lands, so are the trading centers of the districts benefited. For instance, a few years ago Lockport, on Bayou La Fourche, was a sleepy old town that had remained practically at a standstill for over half a century. A reclamation project was started and completed immediately back of the town. The effect

was miraculous. Lockport became one of the most busy, thriving and progressive towns of Louisiana, and land values in the village doubled and trebled in value.

A few weeks ago work was begun on the Kenner project. The effect on land values at Kenner was almost instantaneous. In many instances values have already increased 50 per cent., and property is in demand. A number of new business buildings are being erected, all of high-class construction, and it is stated that the Kenner project is already receiving applications for lands in advance of reclamation. These applicants are not only truck growers, but people of New Orleans as well, who see in the good-road movement and the extensive land development projects an opportunity to create a highly desirable, very accessible suburban residence district around Kenner right away.

ALBERT PHENIX.

For Florida Portland Cement.

Chas. R. Gostling, Eustis, Fla., in a letter to the MANUFACTURERS RECORD says:

"I have been in Florida for the past year investigating the so-called muck beds of Florida. Many of these beds, upon which I have options, as well as about five acres which I have purchased near Eustis, contain a pure white (when calcined) kieselguhr, or diatomite, or infusorial earth of the finest quality. This mineral, as it is one one so conceded by most geologists, has a high value as an insulating material and scores of other purposes too numerous to mention here. I have data from users and buyers of this mineral, to whom I have submitted samples, who will contract with me for over 50,000 tons a year.

"In addition to the development of these extensive deposits of earth in Florida, it has been my privilege to get in touch with the State geologist at Tallahassee, and from his reports I find millions of tons of suitable material, limestone, clays and marl, for the production of Portland cement of a standard quality. I find that Florida alone will keep a cement mill of 2000 barrels per day capacity, running the whole year."

Cotulla Company's Irrigation Plans.

Referring to his company's plans, Matt Russell of Cotulla, Tex., president of the Cotulla Reservoir & Irrigation Co., writes to the MANUFACTURERS RECORD as follows:

"The plans contemplate the construction of an immense storage reservoir in the Nueces River Valley formed by an earth dam 60 feet above stream bed, extending across the Nueces River and valley. This dam and concrete wasteway will be 5500 feet along its creek and form a reservoir storing 400,000 acre feet of water. This water will be carried by a gravity canal 20 or 35 miles long down the Nueces River Valley and distributed over 100,000 acres of land by gravity. This irrigation area lies in eastern part of La Salle county. It will soon be bisected by an extension of the Asherton & Gulf Railroad, giving direct connection with the Gulf of Mexico at Aransas Pass or Rockport.

"The value of this great project to this section of the county cannot be estimated, as it will furnish the only element necessary to the rich valley lands of the Nueces River, which will produce abundantly the valuable crops that this section is so well noted for."

The State Geological Survey of Kentucky, C. J. Norwood, director, has published a bulletin by F. Julius Fols on the coals of the region drained by the quicksand creeks in Breathitt, Floyd and Knott counties.

BIRMINGHAM IRON MARKET.**Recent Trading Has Been of Rather a Desultory Nature.**

[Special Cor. Manufacturers Record.]

Birmingham, Ala., July 6.

For some 10 days past trading in the local pig-iron market has been of rather a desultory nature, but the attendant conditions were such that the producing interests are well satisfied with the tonnage that has been entered. Practically the entire output of the favorite brands has been sold for the next three months, and in certain cases it is estimated that one-half of the probable make during the last quarter has been engaged. These comparisons do not allow for the increase that has just been made in the output, nor for the additions being contemplated, against which the current demand is, of course, applicable. Since last report one furnace has been put in operation, and by the substitution of a large stack for a smaller one the output at another plant was increased some 300 tons per day; however, this increase was offset by the blowing out of one furnace in the period referred to. At this time an additional stack is scheduled to go in blast on July 20, and still another is to be blown in shortly after August 1. The level of prices is practically the same as last reported. All of the favorite brands are being held firmly at \$12 Birmingham for any delivery within the remainder of the year, with the tonnage available at lower figures, even for prompt shipment, very limited. Except for small quantities, and for deliveries in the last quarter strictly, the \$12 basis has proven prohibitive, but without any disposition on the part of the producers to make concessions. The sale of 7500 tons of Nos. 2, 3 and 4 foundry for delivery in the last quarter is just reported at a basis of \$12 Birmingham, together with a fairly attractive tonnage in smaller quantities for nearby delivery. A round tonnage for export to Italy has just been accredited a local producer, and at figures slightly higher than a \$11.50 per ton basis, but such a sale is not confirmed at this time.

The inquiry now pending involves an aggregate tonnage well around 20,000 tons, of which the larger portion is for comparatively early delivery. There is more or less disposition apparent with the largest melters to "feel" the market for forward deliveries, and in some cases quotations to cover the first quarter of next year have been requested. None of the producers are willing to commit themselves for this last, and there is some reluctance in submitting figures to cover the remainder of the year. In one case a recent offer of 2500 tons for prompt delivery was refused, owing to the inability to furnish the tonnage. The movement from furnace yards was, of course, somewhat lighter during the past week than during the week just previous, due to the holiday, but recent specifications indicate that practically all Southern foundry plants have resumed operations to the former extent. The resale and warrant iron that is available does not yet figure in the situation, so far as prices or movement is concerned, thereby further indicating that the situation as a whole is in the hands of the furnace companies. It is understood that stock figures of July 1 will show an aggregate of less than 40,000 tons in warrant yards, while all stock, with the exception of charcoal iron, will be shown as less than 100,000 tons.

The blowing in of one Ironaton furnace by the receivers of the Alabama Consolidated Coal & Iron Co., which has just been effected, was a significant item of the week, although the output of that plant

does not always compete with the regular foundry grades, owing to the analysis of the product. It is noted that the Etowah furnace of the same company, and which was producing regular foundry grades, has been blown out. For such special analysis iron as has been sold recently premiums of 50 cents to \$1 per ton over the regular No. 2 foundry price have been received.

The condition of the market for standard basic iron and for charcoal iron is very similar to that of the foundry iron market, but without recent transactions of note. The stock of both grades, as shown by July 1 returns, will no doubt be smaller than at any time for some years past. All grades are quoted as follows per gross ton f. o. b. cars at Birmingham district furnaces for delivery in the remainder of the year, viz.: No. 1 foundry, \$12 to \$12.50; No. 2 foundry, \$11.50 to \$12; No. 3 foundry, \$11.25 to \$11.75; No. 4 foundry, \$10.75 to \$11.25; gray forge, \$10.50 to \$11; basic, standard, \$11.50 to \$12; charcoal iron, \$22.50 to \$23.

The sale of 1000 tons of gray forge for spot shipment has just been reported at \$10.50 per ton at Birmingham, with 100 tons of mottled for the same delivery bringing \$10.25 per ton at Birmingham.

The producers of cast-iron water and gas pipe are stronger in their views in the matter of price, although recent bookings are comparatively small. Specifications for some 2500 tons of water pipe for the requirement at Granite City, Ill., were placed some 10 days ago, but since that time small lots for maintenance work have been the only considerations. The general outlook for new business is considered very encouraging, while calls against all contracts now in hand are equal to the several outputs, especially of the smaller sizes. No additions have recently been made to the municipal contracts for early letting. Revised quotations are as follows per net ton f. o. b. cars here for class "B," or water pipe, viz.: Four-inch, \$23.50; six-inch and over, \$21.50, with \$1 per ton extra for class "A," or gaspipe. Special fittings are quotable at from \$45 to \$50 per net ton at foundry. These prices are very firm for small orders, and would hardly be shaded to any appreciable extent for municipal requirements.

The condition of the finished iron and steel market, so far as local operators are concerned, is practically the same as at the time of last report. A very satisfactory tonnage of structural material has recently been placed with a local concern, and additional specifications are now under consideration. Practically all of the mills are in full operation, and are more or less behind with specifications for certain sizes and shapes. The open-hearth furnaces of the Southern Iron & Steel Co. at Alabama City, Ala., are undergoing repair, but there is sufficient billets on hand to afford steady operation of the finishing mills. It is noted that the several wire products of this mill have moved very satisfactorily during the past few months, as well as the output of light steel rails.

The coal and coke market is very quiet. Contracts for the former are being made from time to time, but the actual movement from mine operations is unusually light. Foundry and furnace coke is very firm, with a much larger consumption soon to become effective, owing to the recent increase in the active furnace capacity. The Lewisburg and Brookwood operations of the Alabama Consolidated Coal & Iron Co. have been resumed, but the "Seares" plant of that company is still closed down. Considerable interest is given in local

circles to the proposal of the Hoadley interests to barge coal down the Warrior River and to New Orleans through the Mississippi Sound and the Lake Borgne Canal. It is understood that contracts for construction of several barges for the purpose outlined have already been placed, but confirmation of same cannot be had locally.

For Hydro-Electric Power.

[Special Cor. Manufacturers Record.]

Morristown, Tenn., July 3.

The Morristown Power & Development Co. has been organized with the view to developing the Nolachucky and Clinch rivers for the generation of hydro-electric power for lighting, manufacturing and railway purposes. The charter members of the company are M. E. McCannless, W. C. Hale, E. M. Grant, W. H. Mullins and John Loop. A committee has been investigating the power of these rivers for two months, and have secured the rights to build dams. The Morristown Interurban Railway Co. has been chartered to build several lines in East Tennessee to use the power furnished by the Morristown Power & Development Co. These lines will intersect a section containing iron, zinc and copper, many tracts of fine hardwood timber and lands suitable for stock raising.

CONSERVING COKE BY-PRODUCTS.**Large Values in Gas and Coal-Tar Products Being Saved.**

The production of coke in the United States in 1911 was less than that of 1910 and below the average for the last six or seven years, according to a statement by Edward W. Parker just issued by the United States Geological Survey, but a striking and encouraging feature of the condition of the industry was an increase in the amount of coke made in by-product ovens and the incidental conservation of the gas and coal-tar products otherwise wasted. In sympathy with the depression in the iron trade, the total production of coke decreased 15 per cent. in 1911, compared with 1910, but the output from the by-product ovens increased 10 per cent.; and the increase in the number of ovens of this type in operation was larger than in any other year, with one exception, since they were introduced into the United States.

The total production of coke in 1911 was 35,555,362 short tons, valued at \$84,103,571, compared with 41,708,810 tons, valued at \$99,742,701, in 1910. The 1911 output consisted of 27,705,517 tons of beehive coke, with an average value of \$2.05 a ton, and 7,847,845 tons of by-product coke, with an average value of \$3.48 a ton. The difference in price was due largely to the fact that most of the by-product plants are situated nearer to the markets for coke, as well as for gas and other by-products, so that the transportation charges are added to the cost of the coal instead of to that of the manufactured coke.

The beehive ovens produced an average of 466 tons each; the by-product ovens an average of 1817 tons each. At the close of 1911 there were 2254 ovens in course of construction, of which 698 were of the by-product type.

The following table shows the total production of coke in the United States during the last five years; it also shows the increase in the production of by-product coke in those years:

Year.	By-product oven coke (short tons).	Total (short tons).
1907.....	5,697,899	40,779,564
1908.....	4,391,226	26,035,518
1909.....	6,254,644	39,315,965
1910.....	7,138,734	41,708,810
1911.....	7,847,845	35,555,362

Plans for 30,000 Horse-Power.

E. C. Deal, general manager of the Augusta-Aiken Railway & Electric Corporation, Augusta, Ga., and associates are reported as to build a hydro-electric plant developing 30,000 horse-power on Stevens Creek, the cost to be \$2,000,000. Electricity will be transmitted to Augusta, Savannah and other cities. J. G. White & Co. of New York are the engineers in charge, and they write to the MANUFACTURERS RECORD as follows:

"We do not consider it advisable at present to issue any details regarding the Stevens Creek development. A little later we will let you have data."

An Open-Shop Town.

Anderson & Teasley, general contractors, of Tampa, Fla., in a letter to the MANUFACTURERS RECORD say:

"It is a source of gratification to us builders to be able to do something else besides keep the time of our employes and pay off. We were once about the worst 'bottled-up' city in the South, it being the terminus of transportation; it was a difficult matter for us to place satisfactory men, and the labor unions had succeeded in keeping just about enough men, regardless of quality, to satisfy the local demands. It is different now. We are running strictly an open shop and not a scab town. We are not discriminating between union and non-union. We never ask a fellow whether he belongs to a union or not. I really think the death knell of unionism has been sounded in Tampa."

Machinery and Technical Novelties.

Nikolai W. Nissen, No. 2 Linie, St. Petersburg, Russia, writes to the MANUFACTURERS RECORD:

"I am a general agent with an established business throughout the whole empire, in contact with 20,000 clients. Want to become agent for any suitable firms making machinery and technical novelties of any kind. Will buy for cash; that is, will pay within 30 days from date of invoices. Want catalogues and prices. Have ample storage warehouse for any purpose."

Transportation Company Chartered.

A charter has been obtained in New Jersey for the Alabama & New Orleans Transportation Co., with authorized capital of \$1,087,500. The objects of the corporation are not stated. The incorporators are Wm. A. Young and Raphael Brill, 37 Wall street, New York, and John R. Turner of Basket Ridge, N. J.

Engines and Irrigation Equipment.

A. Fernandez Montilla, Merida, Yucatan, Mexico, writes to the MANUFACTURERS RECORD:

"I would like to become agent for some kind of motive power that could burn natural gas or oil in place of gasoline or alcohol. Equipments for irrigation, not too large, also interest me; small irrigating apparatus."

The Tucapau Mills, Wellford, S. C., has awarded contract to the General Electric Co., Schenectady, N. Y., for additional electrical machinery to include 900-kilowatt alternating generator, 15-kilowatt exciter, three 900-kilowatt and three 750-kilowatt alternating transformers and switchboard.

The Dacotah Cotton Mills, Lexington, N. C., provided for 960 spindles in the spinning frame mentioned last week. The company has also ordered a 162-spindle speeder (from the Whittin Machine Works of Whittinsville, Mass.), and all the new machinery will increase its production about 2000 pounds weekly.

GOOD ROADS

WEEK'S HIGHWAY RECORD.

Progress in Southern Road and Street Improvement.

[Full details of highway undertakings are given in the Construction Department.]

Bonds Voted.

Atlanta, Tex.—City voted issuance of \$25,000 road bonds.

Indianola, Miss.—Sunflower county will issue bonds for road and bridge construction.

Natchez, Miss.—Adams county adopted resolution to issue \$150,000 bonds for road construction; propose to improve 60 to 70 miles of road.

San Angelo, Tex.—Tom Green county voted \$70,000 bond issue for road and bridge construction.

Selma, Ala.—Dallas county voted \$100,000 bond issue for completion of road system.

Staunton, Va.—South River district of Augusta county voted \$250,000 bond issue to construct about 75 miles of road.

Taylor, Tex.—City voted \$25,000 bond issue to pave streets.

Bonds to Be Voted.

Atlanta, Ga.—Special committee of City Council recommended \$2,000,000 bond issue for street improvements.

Dublin, Va.—Dublin magisterial district will vote July 30 on \$100,000 bond issue for road construction.

Dyersburg, Tenn.—Dyer county will vote on \$150,000 bond issue to construct road.

El Paso, Tex.—El Paso county will vote on \$15,000 bond issue to extend county road 25 miles.

Ferris, Tex.—Ferris district of Ellis county votes August 10 on \$100,000 bond issue for road construction.

Lookout Mountain, Tenn.—Town votes August 8 on \$25,000 bond issue to macadamize and pave streets.

Macon, Miss.—Noxubee county voted July 9 on bond issue for road construction.

Warrenton, Va.—Cedar Run district of Fauquier county votes August 17 on \$60,000 bond issue, to be supplemented by \$14,000 subscription from automobile fund of Richmond to Washington highway, for construction of macadam road from Stafford county line to Center line district.

Contracts Awarded.

Birmingham, Ala.—City awarded three contracts for street paving.

Easton, Md.—City awarded contract for street paving; materials, crushed trap rock and bituminous cement; cost about \$150,000.

Meridian, Miss.—Lauderdale county awarded contract to build 7½ miles of Causeville Rd.; sand and clay.

New Iberia, La.—City awarded contract at \$15,335 to pave 6290 feet with sand and gravel.

New Orleans, La.—City awarded contract at \$35,319.10 to pave Frenchmen street with Sicilian rock asphalt; also at \$19,266.20 to lay subsurface drains, etc., on same street.

Port Gibson, Miss.—Claiborne county awarded contract to improve 200 miles of roads.

Roanoke, Va.—Randolph county awarded contract at \$8000 to construct State-aid road from Roanoke to Rock Hill, about five miles.

St. Louis, Mo.—City awarded contract at about \$70,000 to pave portions of certain streets with asphalt; also awarded contract at \$2092.62 to pave portion of street with brick.

Contracts to Be Awarded.

Athens, Ala.—City receives bids July 19 for grading and constructing 8000 square yards cement sidewalk, 725 square yards vitrified brick crosswalk and 650 square yards crushed limestone screening sidewalk.

Atlanta, Ga.—Fulton county will pave half mile of Habersham road.

Birmingham, Ala.—City received bids July 9 for constructing 9600 square yards asphalt, asphalt block, bitulithic, brick, concrete or wood block pavement on First avenue.

Corpus Christi, Tex.—City opens bids August 10 for paving 150 blocks; \$400,000 is available for street improvements, including paving.

Cotulla, Tex.—City will construct 4000 square feet cement sidewalks.

Fort Myers, Fla.—H. E. Heitman receives bids August 1 to clear, grade and construct 10 miles water-bound macadam between Whiskey Creek and Punta Rassa; work consists of about 60 acres of clearing, 50,000 cubic yards earth excavation, 185 cubic yards concrete culvert work and 420 feet vitrified pipe.

Greensburg, Ky.—Greensburg & Camp Knox Turnpike Co., capital stock \$17,000, incorporated to construct 12 miles of road.

Greenville, Ala.—Butler county receives bids August 7 for grading and surfacing with sand-clay about 12 miles State-aid road; expenditure \$17,000.

Greenwood, Miss.—City receives bids August 6 to construct 25,182 yards of street paving; vitrified brick, bitulithic or creosoted wood block; work includes 10,500 linear feet concrete curb gutter, 2000 linear feet granite header and 2000 cubic yards excavation.

Johnson City, Tenn.—City receives bids July 18 to construct proposed street paving; brick asphalt, bitulithic, wood block, granitoid, asphaltic concrete, concrete or turvia for improvement districts Nos. 11, 12 and 13.

Little Rock, Ark.—City receives bids July 15 for constructing paving in street improvement district No. 205.

Louisa, Ky.—City receives bids July 18 for about 23,000 linear feet combined concrete curb and gutter.

Mt. Sterling, Ky.—City will construct 4700 square yards brick paving; also curb and gutter.

Norfolk, Va.—City receives bids July 18 to regulate and pave portions of certain streets.

Richmond, Va.—City received bids July 10 for asphalt block, wood block, bituminous macadam, sheet asphalt, bitulithic or prepared granite block paving; appropriation \$50,000.

San Antonio, Tex.—City will pave 23,000 sq. yds. with creosoted pine blocks.

Scottsboro, Ala.—Jackson county receives bids August 6 for grading, draining and macadamizing part of Crow Creek road; expenditure on State aid, \$4000; at same time will lay balance of road to Tennessee State line, expenditure \$14,000.

West Plains, Mo.—West Plains special road district will grade and construct rock roads; cost \$30,000.

Southern Iron Furnace Improvements

In keeping with the advance that is being made in the betterment of furnace practice in the South, the Woodward Iron Co. of Woodward, Ala., has ordered of the General Electric Co. three 40,000 cubic feet per minute 15 to 30 pounds pressure air compressors, driven by high-pressure steam turbines. The Chattanooga Coal & Iron Co. has ordered of the same company one 13,000 cubic feet per minute 16 to 25 pounds pressure air compressor, driven by a mixed pressure turbine.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

SEABOARD'S NEW ROUTE.

West Coast Florida Line Through Acquisition of Tampa Northern.

The acquisition of the Tampa Northern Railroad by the Seaboard Air Line, which has just been announced, indicates that some very important changes in the railroad map of Florida are pending. The Tampa Northern has 50 miles of line in operation from Tampa north to Brooksville, Fla., and it has long been proposed to extend about 40 miles farther in the same direction to Dunnellon, Fla. The company has excellent terminals at Tampa, which will be of particular value to the Seaboard, although the latter also possesses superior harbor terminals at the same city.

But the chief worth of the Tampa Northern to the Seaboard lies in the fact that it offers a way to easily and speedily provide a through route between Tampa and the north and west without going through Jacksonville, as is necessary now, and which requires quite a swing to the eastward. That the Seaboard will build the projected extension from Brooksville to Dunnellon is accepted as a fact, or it may build only about 25 miles and connect at Inverness, Fla., with its line there, and which will afford a direct through route between Tampa and Gainesville, Fla. From Gainesville the construction of 40 miles more of new road would connect at Lake City with the Seaboard's east and west line across the northern part of Florida between Jacksonville and Tallahassee and afford the new route desired in and out of the State.

Yet it is possible, if not immediately probable, that the Seaboard, with its promise of revived activity in construction under the direction of S. Davies Warfield and associates, may see fit to build an entirely new and very direct line not far from the Gulf coast in order to reach Tallahassee. This would demand about 150 miles of work from Dunnellon northwest through Marion, Levy, Lafayette and Taylor counties to meet its present line, which extends southeast to Covington, Fla., or a total of about 190 miles of new construction, as compared with about 65 miles if it be decided to go via Gainesville.

The construction of such a line would open up an entirely new region to settlement, although the Atlantic Coast Line has a road through part of the territory which would be traversed. And this directs attention to the fact that the Coast Line is pushing construction on its new west coast route from Dunnellon to Old Town, Fla., and that it will also build from Perry to Monticello, Fla. Both of these pieces of construction are under contract, and will doubtless be soon completed, as it is understood there are no serious engineering difficulties to be encountered. It is said that the roadbed is being made wide enough for two tracks, so that if at any time it be desired to make it a double-track line the change can be readily accomplished.

Dispatches from Tampa say that the Tampa Northern has been reorganized, with Seaboard Air Line officials in charge. It is stated that Charles R. Capps is elected president; R. L. Nutt, secretary and treasurer; D. C. Porteous, assistant secretary; T. W. Roby, comptroller, and Peter O. Knight of Tampa, general counsel. Mr. Capps is a vice-president of the Seaboard, and the others are also of its

official staff at Portsmouth, Va., in positions similar to those named.

TO GULF AND RIO GRANDE.

English Capital Building Railroads and Harbor Facilities in Texas.

E. Cowperthwaite of London, president of the San Antonio, Rockport & Mexican Railway, has, according to a report from San Antonio, Tex., cabled from England that the English contract syndicate which is building the road has voted funds for its construction to the Rio Grande as rapidly as possible. This work will be separate from the company's line now building to the Gulf. The new line, it is said, will run to Laredo, Tex., but it is proposed to finally cross into Mexico and build to Monterrey, and thence to Tampico, Mex. Concessions will have to be obtained from the Government of Mexico.

In connection with these enterprises the Rockport & Harbor Island Dock & Terminal Railway Co. has also been chartered in Texas with capital of \$12,000. It is to build a terminal railroad for the system from Rockport to Harbor Island at Aransas Pass. Docks, wharves, warehouses and other port facilities will also, it is understood, be built. Incorporators include E. Cowperthwaite, S. A. Hopkins, Charles G. Johnson, R. R. Russell, Nat M. Washer, R. L. Ball, H. E. Hildebrand, W. A. Lowe, J. A. Haile and J. Frank Davis of San Antonio. Headquarters of this company will be at Rockport, although the headquarters of the parent corporation are at San Antonio, Tex.

S. A. Hopkins, San Antonio, wires that the Harbor Island holdings of the company are 4500 feet frontage and 4000 feet deep. The preliminary plans are for five docks and six slips, with necessary trackage. The dock dimensions, including aprons, are 100 feet width by 800 feet length, and they will be of concrete piling construction. Estimates of cost for docks and buildings are not yet complete.

COMBINE TWO PLANS.

T. O. Troy, Who Built a Connecting Road in Virginia, Now Engaged in North Carolina.

The Greensboro Northern & Atlantic Railway Co. has been formed at Greensboro, N. C., and represents, it is stated, a combination of the plans of the Greensboro, Roxboro & Norfolk Railway Co. and the Lynchburg, Danville & Carolina Railway Co., the first of which proposed to build northeast from Greensboro to Roxboro, N. C., about 50 miles and the latter from Lynchburg via Danville, Va., to Burlington and other points in North Carolina. T. O. Troy of Amherst, Va., has been made president of the new combination, the other officers being J. W. Fry of Greensboro, N. C., vice-president and treasurer, and M. W. Thompson, secretary. Besides the president and vice-president, the board of directors includes R. C. Hood, A. L. Brooks, C. D. Benbow, A. B. Kimball, A. W. McAlister, E. J. Justice, Garland Daniel and John J. Phoenix. A committee of the Chamber of Commerce at Greensboro has been especially active in promoting the railroad plans.

Captain Troy, president of the company, built the Virginia Air Line several years ago between Strathmore, Palmyra and Lindsay, Va., and which is now part of the Chesapeake & Ohio Railway system. He has been for several months figuring upon the construction of the projected line from Lynchburg and Danville into the Old North State. It is proposed to immediately build from Greensboro along Haw River through Guilford, Alamance, Chatham and Lee counties to a connection with the Seaboard Air Line

and the Norfolk Southern railroads. After that is constructed it is intended to extend to Roxboro and Oxford, N. C., and also to Danville and Lynchburg. Much of the engineering work is said to have been completed, but engineers will take the field soon to complete the location.

\$200,000,000 FINANCE PLAN.

Missouri Pacific Shareholders Approve Big Mortgage for Needs of System.

The stockholders of the Missouri Pacific Railway have approved the bond issue of \$200,000,000 described in the MANUFACTURERS RECORD of May 9, when the new financing plan was prepared by the board of directors to take care of the property for many years by providing a new mortgage for the amount named, and under which bonds can be issued from time to time for refunding and other purposes, including betterments and extension as might become necessary hereafter.

One of the improvements said to be in contemplation was the double-tracking of the main line between St. Louis and Texarkana, about 500 miles, but an official statement has just been made that the company does not intend to do such work except at various times and at different points on the route as may be made necessary by traffic requirements. Neither is it intended to build an extension to New Orleans, as was rumored.

That there will be general betterments to the entire system under the plans of President B. F. Bush is already known.

PIEDMONT & EASTERN.

Company Chartered to Fulfill Inter-urban Plans Long Contemplated.

The Piedmont & Eastern Railway Co. has been chartered in North Carolina, with headquarters at Burlington, to build inter-urban lines (including street railways), for a distance of 50 miles in any direction from there and reaching Winston-Salem, Greensboro, Graham, Chapel Hill and Durham, besides other points, as well as Burlington. It is understood that the electric railroad between Burlington, Graham and Haw River, about 10 miles, will be into the proposed system.

The company has an authorized capital of \$100,000, and the incorporators are J. W. Murray, John M. Cook, J. H. Harden and A. L. Davis of Burlington, N. C.; Charles A. Scott of Graham, N. C., and J. R. Paschall, James Mullen, Warner Moore and C. Boice of Richmond, Va.

GEORGIA CENTRAL BONDS.

Extensive Financial Plan Approved, But Only Part of Loan Issued Soon.

The stockholders' meeting of the Central of Georgia Railroad, held at Savannah July 8, authorized the company to issue \$80,000,000 of bonds for refunding and general purposes, the object being to provide financing for some years.

Not more than \$5,000,000 will be immediately issued, part being for improvements and betterments. About \$40,000,000 of the total will be used from time to time to refund existing loans, the remainder being reserved for issue in various amounts when required hereafter to make additions and improvements.

RALEIGH TO CHARLOTTE.

Norfolk Southern Stockholders Approve About \$5,500,000 of Bonds for the Work.

The proposed bond issue of the Norfolk Southern Railroad for its extension from Raleigh to Charlotte, N. C., about 135 miles, has been approved by the stockholders. It is for \$5,456,000. Construction of the extension began a month or

two ago, but details of the route have not all been determined.

The building of this line, which is the result of the acquisition of the Raleigh & Southport, the Durham & Charlotte and the Aberdeen & Asheboro roads, will take the system into an entirely different section of the State from that in which it has hitherto operated.

One route under consideration is from Mt. Gilead direct to Charlotte, and the other is from Troy via Concord and Albemarle to Charlotte. It is said that some distance would be saved by building from Mt. Gilead, but, on the other hand, it is claimed that greater advantages would be obtained by choosing the other line for construction. A decision is soon expected.

Stamford & Eastern.

A report from Fort Worth, Tex., says that President Charles E. Schaff of the Missouri, Kansas & Texas Railway has recently made a trip over the proposed route of the Stamford & Eastern Railway Co. between Stamford and Fort Worth, Tex., about 150 miles. He declined to say whether his company contemplated building the road, of which at present the president is W. T. Andrews, and P. G. Burns is chief engineer. A. M. Acheson, chief engineer of the Missouri, Kansas & Texas at Dallas, Tex., accompanied Mr. Schaff on the trip, besides F. S. Hastings of S. M. Swenson & Sons, land and cattle owners.

That a railroad will be built within a year or two from Stamford east appears probable. There is a stretch of territory about 100 miles long between Stamford and Mineral Wells which is without railroad facilities, and it cannot indefinitely lack adequate accommodations. Already there are signs that other roads have aims in that direction. For instance, the Gulf, Texas & Western is about to build south from Jacksboro to Salesville, which will connect with the Weatherford, Mineral Wells & Northwestern, that now extends west as far as Graford. A nearly direct line from Mineral Wells to Stamford would touch such places as Palopinto, Breckenridge and Albany, Tex.

Gulfport & Western.

W. H. Hardy, Gulfport, Miss., president of the Gulfport & Western Railroad Co., says that its proposed line is from Gulfport to Covington, La., 62 miles, via Nicholson, La., which is on the New Orleans & Northeastern Railroad. The road will have a maximum grade of only six-tenths of 1 per cent., and it will be built with 80-pound rails, steel bridges, concrete culverts and up-to-date stations and other facilities. The date to receive bids is not yet announced. Bridges will be erected over Wolf River, Jordan River and East and West Pearl rivers.

In addition to the other railroad mentioned, connection will be made with the New Orleans Great Northern at Wortham Siding, the Baton Rouge, Hammond & Eastern at Covington, and the Louisville & Nashville and the Gulf & Ship Island roads at Gulfport. The route is practically an air line, as it is stated that the exact distance direct from the Union Station at Gulfport to Covington is 60 miles, and the located route is only 62 miles. E. McL. Long, 172 Fulton street, New York, is chief engineer.

Besides Mr. Hardy, the directors of the company are L. N. Dantzer, vice-president; George P. Hewes, treasurer; B. C. Bowen, secretary; A. McAlpin and T. A. Hardy, all of Gulfport, and H. S. Watson of Logtown, Miss.

New Equipment, Rails, Etc.

Washington Railway & Electric Co. has ordered from the J. G. Brill Company,

Philadelphia, 35 cars, of which 30 will be of the center entrance type.

Southern Railway has ordered 17,700 tons of rails from the Tennessee Coal, Iron & Railroad Co., this being in addition to orders placed some weeks ago.

Missouri & North Arkansas Railroad has ordered two engines from the Baldwin Locomotive Works, Philadelphia.

Meridian & Memphis Railway has ordered 3300 tons of new 60-pound steel rails from the Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

Kansas City Terminal Co. is reported to have ordered 7000 tons of rails from the Illinois Steel Co., Chicago.

Yadkin River Railway, says a market report, has placed an order for 3000 tons of rails with the United States Steel Corporation.

Baltimore & Ohio is reported to have ordered 1000 steel underframes from the Ralston Car Co., Columbus, O., and 400 steel underframes from the Pressed Steel Car Co., Pittsburgh.

Extension Toward Montgomery.

A letter from Peirce Crockett, Elmodel, Ga., quotes President Frank Roberts of the Valdosta, Moultrie & Western Railway, Valdosta, Ga., as saying that by September 15 construction will begin on the extension from Moultrie, Ga., to Montgomery, Ala., and the name of the road will be changed to Valdosta, Fort Gaines & Montgomery.

Mr. Crockett says that this line will traverse one of the best and richest sections of Southwestern Georgia, namely, Mitchell, Baker, Early, Calhoun and Clay counties, and will develop some very fertile lands now idle for lack of transportation facilities. It will also open valuable timber lands, and the water-powers on Norhamay and Chickasawhatchee creeks will be brought into use for manufacturing purposes. This work of development will include the little town of Elmodel, in Baker county, which is in a productive region, having valuable water-power and extensive timber land nearby. There is considerable capital, and it is expected that many enterprises will result.

The Great Falls & Old Dominion Railway has begun the operation of electric trains over its line in connection with the Bluemont road of the Southern Railway. This makes a through run of about 60 miles from Washington, D. C., to Bluemont, Va.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Southern Building in June.

The following brief summary of building operations as shown by reports from representative cities in the South and Southwest indicates much activity in these sections during June. In Richmond a total of 125 permits was issued, including those for alterations and repairs, representing cost of construction of \$735,453. The building record for the month in Greenville, S. C., more than doubles that of June, 1911. A total of 55 permits was issued, representing a cost of construction of \$86,136. In Charlotte 27 permits were issued for new buildings and 9 for alterations and repairs, representing a total cost of construction of \$108,985. As compared with June, 1911, these figures show an increase of \$18,655. The total expenditure authorized in Charlotte for the first six months of the year was \$591,079, as compared with \$387,581 for the corresponding period of last year.

A total of 228 permits was issued in Savannah during the first six months of the year, as compared with 171 during the corresponding period last year. These figures show the apparent increase in the value of construction. The value of building operations in Birmingham for the month is estimated at \$359,235, showing an increase of \$135,354 over June, 1911. In Jacksonville a total of 110 permits was issued during the month, representing a cost of construction of \$258,469. These figures show an increase of \$61,817 as compared with May. Permits were issued in Tampa to the value of \$60,470, showing a slight decrease as compared with June, 1911. In Memphis a total of 326 permits was issued during the month, representing a cost of construction of \$709,326. As compared with June, 1911, these figures show an increase of 69 in the number of permits and about \$25,000 in the value of operations. Permits were issued in Knoxville for an aggregate cost of construction of \$73,366, which was an increase of about \$20,000 as compared with June of last year. In Nashville permits were issued for construction during the month estimated to cost \$92,027. As compared with June, 1911, these figures show a decrease of about \$40,000. A total of 239 permits was issued in Louisville during the month, representing a cost of construction of \$807,670 and showing an increase of \$444,551 as compared with June, 1911. Permits were issued in St. Louis during the month to the number of 495 for new buildings to cost \$1,703,572, and to the number of 360 for alterations and repairs to cost \$227,504, making a total of \$1,931,076. As compared with June, 1911, these figures show an increase of about \$150,000. Permits were issued in Dallas during the month for construction estimated to cost \$561,914, showing an increase of about \$250,000 as compared with May. During the month a total of 56 permits was issued in Galveston, representing a cost of construction of \$29,220. A total of 435 permits was issued in Kansas City, representing a cost of construction of \$1,342,502. As compared with June, 1911, these figures show an increase of 48 in the number of permits and \$396,350 in the cost of construction. The value of construction for which permits were issued in Little Rock during the month was estimated at \$222,277. In Baltimore the estimated cost of improvements, including alterations and repairs, for which permits were issued during the month was estimated at \$703,620.

To Develop 3000 Acres.

The Cumberland Lumber Co., Sparta, Tenn., has purchased 3000 acres of hardwood timber land at \$45,000, and will develop the property. It will install a band-saw mill and large steam log skidder, for which equipments it invites offers for purchase or lease.

Daily Capacity 2500 Barrels.

The Chickasaw Cooperage Co., Memphis, Tenn., has purchased a site of 14 acres for its proposed cooperage to replace present plant. This new plant will have a capacity of 2500 barrels in 10 hours, and the company writes to the MANUFACTURERS RECORD that it has practically arranged for all the necessary equipment.

To Develop 4000 Acres.

The Southern Lumber & Manufacturing Co., Nashville, Tenn., has purchased and will develop 4000 acres of hardwood timber at Sparta, Tenn., the purchase price being \$50,000.

MINING

CLARKE COUNTY IRON.

Something About the Ore in a Mississippi County.

John L. Buckley of the Tenth Circuit Court District of Mississippi, writing from Enterprise, Miss., to the MANUFACTURERS RECORD, says regarding the iron ore in Clarke county:

"The ore was discovered in this vicinity over 20 years ago. A thorough scientific test was made by such well-known and learned gentlemen as Drs. Brainerd, West and Cox, who pronounced it to be a carbonate iron ore, and the deposits from 10 to 15 feet in thickness. They also said, at the time in their reports, that the ore was not in pockets, but was persistent and perfectly stratified and could be located with certainty where it had not been cut by erosion.

"Underneath the ore is found a limestone deposit of about five feet thick, which carries from 55 to 60 per cent. of lime, and from 10 to 15 per cent. of iron, which they claim to be an excellent fluxing rock. Both the lime and iron ore are superimposed upon burr rock associated with green sands. Below the burr rock there is another deposit of very pure lime rock about eight feet in thickness. At that time the gentlemen reported the iron ore to be practically inexhaustible, and that it was exposed in places and could be economically mined in open cuts by removing a few feet of stripping.

"The ore is soft, and that exposed on the surface can be easily dug with pick and shovel.

"By the charcoal process it was estimated that a ton of iron could be smelted at a cost not exceeding \$7.50. The different analyses showed these ores to contain an average of 46.9 per cent. of iron. Mr. Witherow of Pittsburgh said, in reference to the Enterprise ore, that 'he thought it would make a fine Bessemer pig, and that if we had the quantity we hold the key to the steel manufacture of the South, it being the finest ore south of the Missouri river.' It is said that this ore is 10 per cent. richer than the well-known Cleveland ore in England, which it greatly resembles in appearance. The matter has lain dormant until recently.

"A few interested gentlemen induced a foundry in Meridian, Miss., to smelt some of the ore, and the test proved to be a success. A very fine quality of pig-iron and steel was obtained therefrom. Dr. E. N. Lowe, State Geologist of Mississippi, went over the fields last week and he seemed to be elated over his findings, and said that this would in all likelihood be in the near future one of the finest iron centers in the United States. He will make an analytical chemical test very soon of the various samples taken from different places where the iron is deposited. The gentlemen who have the matter in charge intend to develop the ore in a practical and conservative way. As the ore has proven to be self-fluxing, and a great quantity of timber is available from which charcoal can be manufactured, the mode of smelting will be by the charcoal process."

HAD A GOOD COAL YEAR.

West Virginia Produces 60,000,000 Tons.

The production of coal in West Virginia in 1911, according to E. W. Parker in a statement issued by the United States Geological Survey, was 59,831,580 short tons, valued at \$53,670,515.

West Virginia, for the last three years the second in rank among the coal-pro-

ducing States, stands almost alone in one particular—the low average price at which its coal, some of it the highest grade bituminous coal produced in the United States, brings to the producer. The only State that compares with West Virginia in this particular is Virginia, whose coal areas in the southwestern part of the State are contiguous to those of Southern West Virginia, the conditions affecting the production and marketing of the product of both States being similar. Neither State has any well-developed local markets, and at least 80 per cent. of the output is shipped to distant points for consumption. The highest average price for West Virginia coal recorded in the last eight years was in the boom year, 1907, when it reached 99 cents a short ton. In 1911 the average price for West Virginia coal was 90 cents.

Texas Breaks Coal Record.

The amount of coal mined in Texas in 1911 was the greatest in the history of the industry in the State, according to Edward W. Parker of the United States Geological Survey, in a statement just made public. The production was 1,974,593 short tons, valued at \$3,273,388, an increase over 1910 of \$2,417 tons and \$112,323. Texas produces both bituminous and lignite coals. In 1911 both the greater production and the greater increase were in bituminous coal—1,038,592 and 73,008 tons, respectively. Bituminous coal was produced in seven counties and lignite in 12 counties. The average price of bituminous coal was \$2.30 and of lignite 88 cents a ton.

The increased production of coal and lignite in Texas in 1911, as in 1910, may be attributed to the growing population and industrial development of the State, which consumes not only its own product, but also considerable quantities brought in from Arkansas and Oklahoma on the north and Colorado and New Mexico on the northwest. It also produces and consumes large quantities of fuel oil. It is estimated by David T. Day, the Geological Survey's petroleum statistician, that the consumption of fuel oil in Texas in 1911 was 6,500,000 barrels.

Coal mining in Texas in 1911 was free from labor troubles. In general, the bituminous mines were worked eight hours a day, and the lignite mines 10 hours.

A 500,000-Ton Increase.

Referring to his company's plans for increasing output, W. L. Moss, general manager of the Continental Coal Corporation, Wallsend, Ky., writes to the MANUFACTURERS RECORD as follows:

"The present output is about 1,000,000 tons per year. We propose to increase 500,000, opening new mines. The amount of machinery to be used has not been determined, but about five additional mines will be equipped. Further information is not available at this time, but announcements will be made after July 25."

A 1,000,000-Ton Increase.

The directors of the Four States Coal & Coke Co., Pittsburgh, have recommended an increase of preferred stock from \$1,500,000 to \$2,500,000 to complete equipment at Anabelle No. 2 mine and open another mine at Dorothy to increase annual output from 2,000,000 to 3,000,000 tons of coal in West Virginia. John H. Jones of the company writes to the MANUFACTURERS RECORD as follows:

"We have no data to furnish as to definite increase in the capital stock."

Helena-Cahaba Mining Co.

The Helena-Cahaba Mining Co., Birmingham, has been incorporated with the following officers: President, James

Bonnyman; vice-president, John F. Meagher; secretary-treasurer, P. J. Garland. It has purchased 440 acres of coal land, including the Coalmont mine, between Birmingham and Blocton, at \$117,000, and will develop the property. It is proposed to make improvements, including new openings, to ensure a maximum output of coal.

Two \$200,000 Coal Companies.

The Bankers Pocahontas Coal Co., Welch, W. Va., has been chartered with \$200,000 capital stock by D. J. F. Strother, I. J. Rhodes, B. O. Swope, W. W. Hughes and L. C. Anderson.

The Fork Ridge Coal Co., Asheville, N. C., has been incorporated with \$200,000 capital stock by W. J. Sproles, F. C. Todd, D. S. Elias and J. W. Haynes. This company has 622 acres of land and mines at Tacoma, Va., equipped for a daily output of 500 to 600 tons of coal. Mr. Sproles is president and Mr. Todd is secretary-manager.

To Mine Mica.

The Sapphire (N. C.) Mica Co., capital stock \$50,000, has been incorporated by C. M. Dunn of Sapphire, A. L. Jones and W. B. Farwell of Balsam, N. C., and others.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

The Cotton Movement.

According to the report of Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, the amount of cotton brought into sight during the first 10 months of the present season was 15,217,700 bales, an increase over the same period last year of 3,570,429 bales. The exports were 10,233,065 bales, an increase of 2,883,513 bales. The takings were, by Northern spinners, 2,334,519 bales, an increase of 280,604 bales; by Southern spinners, 2,434,197 bales, an increase of 249,810 bales. The amount brought into sight in 309 days up to July 5 was 15,241,733 bales, an increase of 3,582,902 bales. The exports were 10,263,766 bales, an increase of 2,910,181 bales. The takings were, by Northern spinners, 2,343,508 bales, an increase of 295,258 bales; by Southern spinners, 2,451,747 bales, an increase of 253,873 bales.

To Double Its Plant.

The Texas Cotton Mill Co., McKinney, Tex., will increase its capital stock by \$30,000 (as stated recently) and issue bonds for \$75,000. This increase will enable the company to duplicate its present equipment of 5152 spindles and 100 looms for manufacturing denims, pin checks, chambrays and awning stripes. The company claims that it has the only mill manufacturing colored cotton goods west of the Mississippi River, and the greater portion of this output is sold in Texas. It has not determined the enlargement details.

To Establish Bleachery.

The Lowell (Mass.) Bleachery has leased a building with 55,000 square feet of space on one floor at St. Louis, and will install an equipment for bleaching tex-

tiles. It is reported that the machinery will cost \$15,000. The company was previously mentioned as to establish this plant.

The Ella Addition.

The Ella Manufacturing Co., Shelby, N. C., has awarded contract for erecting additional building to Slattery & Henry of Greenville, S. C., and not to R. A. Brown's Sons, as stated last week. Contract for cottages (25) has not been awarded, plans not having been prepared. Addition will be 80x220 feet, set parallel with present building and connected by a cross-section 32x40 feet. Contract for the new machinery—5184 ring spindles and 126 looms to double capacity—has been awarded.

For Cotton Belting and Rope.

W. Turner Baird, Gainesville, Fla., writes to the MANUFACTURERS RECORD as follows:

"I would like to get in touch with some source of information where I can find out the approximate consumption of cotton rope by States and the approximate consumption of cotton belting by States; also the approximate cost of plants for the manufacture of cotton rope and cotton belting, and the approximate profit that is being made out of these kind of institutions in other sections."

The Kannapolis Enlargements.

The Cannon Manufacturing Co., Concord, N. C., has completed foundations for its additional mill at Kannapolis. This new structure will be two stories high, 100 x400 feet, and previous reports stated that 30,000 to 35,000 spindles will be installed. The company now has 30,000 ring spindles, 900 narrow looms, etc., at Kannapolis. It will also build a four-story addition to its bleachery.

Montgomery Cotton Mills.

The Montgomery (Ala.) Cotton Mills, reported incorporated last week with \$100,000 capital stock, buys the company of the same name having 6240 ring spindles, 162 broad looms, etc.

Textile Notes.

The Strickland Cotton Mills, Valdosta, Ga., will invest \$10,000 for additional machinery.

The Norris Cotton Mills Co., Catechee, S. C., provided for 240 spindles in the spinning frame mentioned last week.

The F. W. Poe Manufacturing Co., Greenville, S. C., provided for 288 spindles in the spinning frame mentioned last week.

The Ivanhoe Manufacturing Co., Smithfield, N. C., will add several thousand spindles and has awarded contract for the new machinery to the Mason Machine Works of Taunton, Mass.

The Palmetto (Ga.) Cotton Mills will install additional carding machines, and has awarded contract for the new machinery to the Howard & Bullough American Machine Co. of Pawtucket, R. I.

The Riverside and Dan River Cotton Mills, Danville, Va., has awarded contract to the General Electric Co., Schenectady, N. Y., for additional electrical machinery to include 1250-kilowatt 600-volt turbine unit, 25-kilowatt two-unit motor generator set and switchboard.

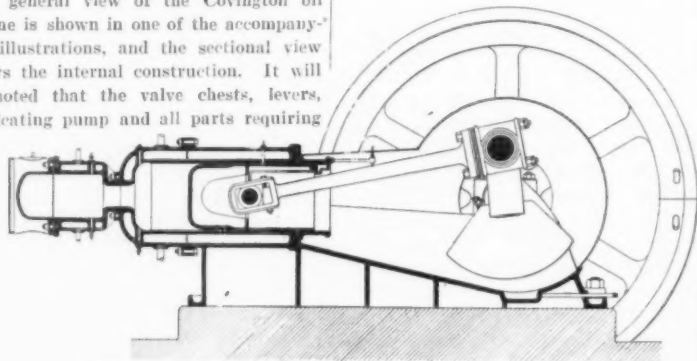
J. L. Stifel & Sons of Wheeling have awarded contract to C. W. Pogue of Wheeling for erecting their calico print works addition mentioned in June. This building will cost \$40,000 and be of reinforced concrete construction, 100x125 feet.

MECHANICAL

Covington Fuel and Crude Oil Engines.

One of the important and rapidly developing industries of the South is represented by the manufacturing plant of the Covington Machine Co., with main office and works at Covington, Va., and sales offices at 88 Wall street, New York. Its economical and efficient low-pressure Covington oil engines are of the four-cycle type, 50 to 300 horse-power, and have been in successful operation for some time for general power and lighting purposes.

A general view of the Covington oil engine is shown in one of the accompanying illustrations, and the sectional view shows the internal construction. It will be noted that the valve chests, levers, lubricating pump and all parts requiring



SECTIONAL VIEW OF COVINGTON OIL ENGINE.

attention are quite accessible. Its simple and strong design permits its use for the most rigid power requirements. The makers have provided large bearing surfaces throughout. It is adapted for all classes of work necessitating the use of a prime mover. The regulation being very close, it is well adapted for driving generators for electric lighting, etc.

Covington oil engines are manufactured in two types, both of which are of heavy-duty, horizontal design, and operated on the four-cycle principle. Type "A" is built in sizes from 50 to 100 horse-power, and type "B" from 100 to 300 horse-power.

The main frame of the engine is of box form, cast solid, with the casting forming the water-jacket of the cylinder and with two main bearings. The frame supports

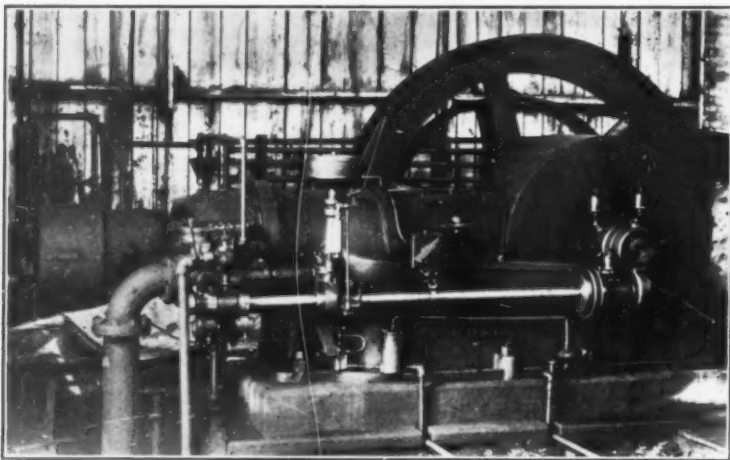
standpipe with an oil strainer and a rotary oil pump, driven by a belt from the main shaft to maintain a constant level of oil in the standpipe, from which the engine oil pump is fed. A special muffler reduces all exhaust noises.

The twin cylinder engines use a one-piece crankshaft and carry one heavy flywheel between the cylinders. Engines are made either right or left-hand drive.

These engines operate on crude or fuel oils, type "A" using as heavy as 24 degrees Beaume; also various grades of heavy by-product oils, which are cheaper than kerosene. Fuel oil is obtainable generally throughout the United States in tank car

lots at 2 to 4½ cents per gallon. With this engine, when operating on three-quarters to full load, each 100 horse-power actually delivered by the engines requires 13 gallons of oil per hour, which, at 3 cents per gallon, costs 39 cents, making a cost for 10 hours' continuous running per day of \$3.90. The type "B" engine, built in sizes from 100 horse-power upward, operates on fuel or crude oils as heavy as 15 degrees Beaume. The consumption per brake horse-power ranges from .85 pounds to .70 pounds, depending on the grade of fuel.

An advantage of these types of engines is that the low pressures involved impose no severe stress on the parts of the engines. A low temperature is also easily controlled without readjustment of the



COVINGTON OIL ENGINE AS INSTALLED.

the cylinder up to its head, providing a large bearing surface for the engine.

The single cylinder engine, equipped with pulley for belt drive, has the crankshaft supported by a large outboard bearing beyond the flywheel at pulley. Ample weight and strength are provided in all parts, and the crankshaft is accurately balanced by counterweights. The admission and exhaust valve cages are located in the cylinder head, providing short, direct passage to the cylinder. A gutter is cast around the lower edge of the main frame to catch the oil-drip, and the crank-drip is entirely enclosed by a sheet-iron hood.

Rigidly attached to the engine is a small

cooling water supply, thus eliminating the danger of cracked cylinder heads due to overheating, too rapid cooling or presence of severe stresses.

Close regulation is accomplished by the action of the high-speed governor varying the stroke of the fuel oil pump by altering the position of the pump lever fulcrum. The time of ignition may be changed at will while the engine is in operation. This is particularly advantageous for changing the times to suit the different qualities of fuel. The use of one heavy flywheel meets the requirements for electric service. The engines may be either connected by belt or direct to generators, extra heavy flywheels being provided for this service.

Speed variations are guaranteed not to exceed 2 per cent. for ordinary fluctuations, 3 per cent. for one-quarter load to full load and 4 per cent. for no load to full load.

The operation of the engine is as follows: The first outward stroke of the piston fills the cylinder with clean air by suction. This air is drawn into the cylinder through a short connection from inside the main frame of the engine. The first inward or return stroke of piston compresses the volume of air held by the cylinder into the combustion chamber and vaporizer cap. At a certain position in the compression stroke the fuel pump injects a charge of fuel oil through the spray nozzle against the hot vaporizer cap, where it is ignited by contact, assisted by the heat due to the compression. During the second outward stroke of the piston the power of the expanding gases exerts a pressure of 300 to 400 pounds per

and "Aladdin Security" kerosene from the Standard Oil Co.

Blasting Rock Ready for Handling.

The economy obtained by executing immense blasts for excavating rocks in all sizes from large quarries has led to the extensive use of blasting powders on a large scale in various parts of the country. An illustration of this is found in the great blast carried through at Piedra, Cal., for the Sharp & Fellows Contracting Co. recently in which about 350,000 cubic yards of rock was broken up at a cost of not over 2.6 cents per cubic yard. The accompanying illustration shows this rock before and after the blasting operations. This blasting was done under the supervision of representatives of the E. I. du Pont de Nemours Powder Co. of Wilmington, Del. The illustration, taken before the blast, shows the quarry floor, 100 feet wide and 1200 feet long. The second illus-



QUARRY BED AS BLAST WAS EXPLODED.

square inch through the piston and connecting rods to the crankshaft of the engine. Complete fuel combustion takes place. No carbon deposits are retained or carried forward by the expanding gases to the cylinder walls or piston rings. The second inward stroke of the piston forces the burned or exhaust gases out of the cylinders. This stroke is completed at the end of the second revolution of the flywheel.

All engines are tested with the grade of fuel oil on which the engine will be operated. Full load tests and varying load tests are also made. Tests of these engines have been made by Prof. Wm. T. Magruder of the Ohio State University,

tration shows the result of this same blast in the large proportion of fine rock, amounting to 85 per cent.; also all of the broken rock remains on the quarry floor, as was intended and allowed for when placing the blasting charges. The explosives used in this operation consisted of 114,000 pounds of Judson R. R. P. and 11,400 pounds of Hercules 60 per cent. nitroglycerine dynamite. Hercules dynamite was not removed from the cases, but all the Judson powder was removed and taken into the tunnels in the original bags, 200 pounds at a time. This was stowed snugly in the pits at the ends of the crosscuts and tamped down by simply tramping on the charge. One Victor No. 6



BROKEN ROCK RESULTING FROM BLAST.

Columbus, O., with the various fuels and oils for which they are designed. These tests verified the claims as to fuel consumption, percentage of variations at different loads, and speeds during an overload test, etc. Fuel oils used in these tests were Texas "Solar" oil from the Gulf Refining Co. of Pittsburgh, with offices in various Southern cities; distillate

electric fuse was used in each charge, all being connected in simple series. All wiring was tested every two hours with a galvanometer during the entire time of the loading and tamping, which took seven days, working day and night. A No. 4 Pull-Up blasting machine was used to furnish electric current to detonate the fuses.

Construction Department

TO OUR READERS!

In order to follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "it is reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be shown on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year. On all advertising contracts in the Manufacturers Record for three months or longer a subscription to the Daily Bulletin is included for the contract period.

BRIDGES, CULVERTS, VIADUCTS

Ark., Lepanto.—Polk county will construct bridge across Little River, reported to cost \$2400. Address County Commissioners, Harrisburg, Ark.

Ark., Little Rock.—Pulaski county will construct concrete bridge on 19th St. pike; County Commissioners received bids until July 6; Joe Asher, County Judge.

Fla., Tampa.—Board of Public Works, 23 First National Bank Bldg., receives bids until 2 P. M. August 6 for construction of proposed reinforced concrete retaining walls and bulkhead at approach to Fortune St. bridge; D. B. McKay, chairman. (See "Machinery Wanted.")

Ga., Augusta.—City and Butt Memorial Association will erect memorial bridge to cost \$30,000; Nesbit Wingfield, City Engineer.

Ky., Owensboro.—A. H. Kennedy, Rockport, Ind., president Owensboro & Rockport Bridge & Terminal Co., advises that previously-noted bridge across Ohio River near Owensboro will be of cantilever type and heavy enough for heaviest traffic; construction contemplated to begin in September; T. H. Hazelrigg, Owensboro, engineer; bridge, with 75 miles of road, to cost \$4,500,000.

La., Tallulah.—Madison Parish Police Jury, W. H. Harvey, secretary, will receive bids September 4 for construction of recently-noted bridges: 80-foot span over Willow Bayou; 64-foot span over Panther Lake; 120-foot span over Sut Bayous; span over

Little Fork; concrete abutments; 12-foot roadway; weight capacity, 20-ton traction engine. (See "Machinery Wanted.")

Miss., Gulfport.—Harrison county will construct steel bridge over Biloxi River west of Saucier, Miss., to cost \$600; Supervisors invite bids.

Miss., Jackson.—Hinds and Rankin counties will construct bridge over Pearl River; Hinds County Supervisors authorized \$100,000 bond issue.

Miss., Batesville.—Board of Supervisors, R. W. Draper, clerk, will receive bids August 5 at courthouse for construction of steel bridge across Hotopka Creek and a concrete bridge across Jones' ditch. (See "Machinery Wanted.")

Miss., Indianola.—Sunflower County Supervisors will issue bonds for bridge and road construction in district No. 3; A. P. Stubblefield, clerk.

Miss., Yazoo City.—T. H. Campbell, Jr., Mayor, states contemplated bridge will be combination railroad and wagon bridge; about 365 feet long; cost about \$20,000; engineer not yet employed; bond issue contemplated. (Recently noted.)

N. C., Gastonia.—Gaston County Commissioners awarded contract to C. W. Requarth Company of Charlotte, N. C., at \$7500 to construct concrete approaches 250 feet long to proposed Sloan's Ferry bridge over Catawba River on Gaston county side; approaches on Mecklenburg county side will be 500 feet long, contract for which has not been awarded; Gaston County Commissioners also awarded contract to construct concrete bridge over Sloan's Branch.

Okl., Guthrie.—City will vote July 10 on \$25,000 bond issue to erect bridges; J. E. Nixby, Mayor.

Tex., San Angelo.—Tom Green county voted \$70,000 bond issue for bridge and road construction. Address County Commissioners.

W. Va., Cassville.—Morgantown & Dunkard Valley Railroad Co., G. B. Hartley, chief engineer, Morgantown, W. Va., will expend \$20,000 to construct one through truss 130-foot span and six 40-foot girders; date of opening bids not fixed. (Recently noted.)

CANNING AND PACKING PLANTS

Ark., Okolona.—Clark county Truck Growers' Association contemplates establishing cannery to have daily capacity of 5000 cans.

Fla., Arcadia.—Arcadia Citrus Fruit Exchange purchased D. N. Barco's packing plant and will remodel; estimated that this plant will handle 100,000 boxes citrus fruits during coming season.

Fla., Arcadia.—D. N. Barco contemplates building packing plant.

Ga., Augusta.—Augusta Abattoir Co. will build cannery. (See "Ice and Cold-Storage Plants.")

Mo., Kansas City.—Armour & Co., Chicago, Ill., have plans, it is reported, for fireproof hoghouse to cost \$150,000.

Okla., Chickatab.—R. Y. Audd & Sons will establish cannery.

Okla., Oklahoma City.—H. R. Houghton, secretary Truck Growers' Association, contemplates building cannery.

Tex., Dallas.—Armour & Co. of Chicago, Ill., purchased. It is reported, site 54x158x93 feet on which to erect plant to cost \$100,000.

Tex., El Paso.—A. P. Coles & Bros., El Paso, and Robert McCandlish, Kansas City, Mo., are reported interested in plans to build meat-packing plant; 123 acres purchased for site; will construct five-mile railway on site; contracted for feeding 10,000 to 15,000 head of cattle. Coles & Bros. wire Manufacturers Record: "We are only selling the land (about 120 acres) and refer you to F. W. McConnell of this city." Mr. McConnell wires Manufacturers Record: "Not able to give details at this time; later will do so."

CLAYWORKING PLANTS

Ala., Prattville.—Pottery.—H. D. Casery and associates contemplates establishing plant to manufacture jugs, jars, flowerpots and similar clay products.

S. C., Kershaw.—Brick.—Kershaw Brick Co., capital stock \$2000, incorporated by J. T. Stevens, G. F. Cook, J. M. Cannon and W. N. Cooper.

Tenn., Nashville.—Brick and Tile.—Rapid City Brick & Tile Co., capital stock \$25,000, incorporated by Harry L. Bevan, R. O. Tucker, W. M. Shipman and others.

COAL MINES AND COKE OVENS

Ala., Birmingham.—Helena-Cahaba Mining Co. incorporated with offices in Brown-Marx Bldg.; president, James Bonnyman; vice-president, John F. Meagher; secretary-treasurer, P. J. Garland; purchased 440 acres coal land, including Coalmont mine, between Birmingham and Blocton, at \$117,000; will develop, making improvements to include new openings to insure maximum output.

Ky., Cromwell.—Martin & Pollock Coal Co. incorporated by A. R. Pollock, Horace Martin and Bayles Baker.

Ky., Uniontown.—Henderson Realty Co., Henderson, Ky., purchased (for \$2252) coal privileges under 200 acres.

Ky., Middlesboro.—Kentucky Southern Coal Co., capital \$15,000, incorporated by J. S. Asbury, J. L. Manring and J. H. Chesney.

Ky., South Carrollton.—Evan-Green Coal Co. (recently noted incorporated) elected R. B. Estlin, president and manager; S. J. Arnold, vice-president; M. A. Summers, secretary-treasurer; will develop mines.

Ky., Wallend.—Continental Coal Corporation plans increasing output from 1,000,000 tons to 1,500,000 tons of coal annually; W. L. Moss, general manager, so advises Manufacturers Record and writes: "Amount of machinery to be installed not determined; will equip about five additional mines; announcements will be made after July 25."

Ky., Whitesburg.—Letcher County Coal Co., M. J. Moss, president, and L. W. Fields, manager, will develop 1500 acres; undecided as to coking or shipping raw coal. (Recently noted under Ky., Middlesboro.)

Va., Tacoma.—Fork Ridge Coal Co., Asheville, N. C., capital stock \$200,000, incorporated by W. J. Sproles, F. C. Todd, D. S. Elias and J. W. Haynes.

W. Va., Annabelle.—Four States Coal & Coke Co. directors recommended increase of preferred stock from \$1,500,000 to \$2,500,000 to complete equipment at Annabelle No. 2 mine and open another mine, at Dorothy, to increase annual output from 2,000,000 to 3,000,000 tons coal; John H. Jones of the company writes to Manufacturers Record: "Have no data to furnish as to definite increase in capital stock"; general offices in Frick Bldg., Pittsburgh, Pa.

W. Va., Arden.—Midland Coal & Coke Co. of Philippi, W. Va., is reported to have acquired property of Tygarts River Coal Co. and of several smaller companies on branch of Baltimore & Ohio Railroad, and planning to erect central power station from which all its mines will be supplied with power.

W. Va., Charleston.—Wattles-Fisher Coal Co., capital stock \$10,000, incorporated by F. M. Wattles, F. M. Fisher, George H. Belches and others.

W. Va., Welch.—Bankers' Pocahontas Coal Co., capital stock \$200,000, incorporated by D. J. F. Strother, I. J. Rhodes, B. O. Swope and others.

CONCRETE AND CEMENT PLANTS

W. Va., Charleston.—Cement Roofing.—Charleston Cement Roofing Co., capital stock \$10,000, incorporated by E. E. Simons, Max Frankenberger, A. F. Harmon and others.

COTTON COMPRESSES AND GINS

Ga., Boston.—Holland Gin & Lumber Co., capital stock \$10,000, organized with O. P. Walton president and J. D. Holland general manager; build cotton gin with daily capacity 75,000 bales, also planing mill, etc. (Recently mentioned.)

La., Mansfield.—De Soto Gin Co., capital stock \$10,000, organized to build cotton gin; J. C. Yarbrough is president.

Miss., Pittsboro.—Pittsboro Gin & Manufacturing Co., capital stock \$10,000, incorporated; C. N. Thorn, president; Alvin Phillips, secretary-treasurer.

S. C., Livingston.—Livingston Milling Co., capital stock \$3000, incorporated; W. R. Pou, president; J. F. Hutto, vice-president; E. P. Hutto, secretary-treasurer.

S. C., Townville.—J. N. Bleckley purchased Fork Township Gin and will double capacity; ordered additional machinery; installing Corliss engine.

Tex., Coleman.—Coleman Gin & Mill Co. increased capital stock from \$10,000 to \$20,000 and changed name to Coleman Gin Co.

Tex., Malone.—Malone Farmers' Gin Co., capital stock \$10,000, incorporated to establish cotton gin; awarded contract for machinery to cost \$10,000, consisting of 10 70-hp stands, 150-horse-power high-pressure boiler, 125-horse-power Corliss engine, etc.; J. M. Moore is president and C. W. Tate secretary-treasurer.

Tex., Harwood.—Harwood Gin Co., capital stock \$6000, organized by W. G. Bouldin, Jr., E. C. Marshall, R. A. McDonald and others.

COTTONSEED-OIL MILLS

Ala., Dadeville.—Dadeville Cotton Oil Co., capital stock \$40,000, organized to rebuild burned Dadeville Oil Mill; will install ice plant; W. C. Stone, manager of former company, can probably give information.

Ala., Florence.—Ashcraft, Wilkinson & Co., capital stock \$20,000, incorporated by M. R. Wilkinson, Lee Ashcraft and John Ashcraft.

Ky., Louisville.—Richland Cotton Oil Co., capital \$60,000, incorporated by F. W. McKee, F. J. Fulton and T. K. Helm.

Miss., Vicksburg.—Vicksburg Cotton Oil Co. increased capital stock; is renovating mill and equipping with new machinery.

Tex., Bellville.—Bellville Cotton Oil Co. will install additional expeller (not propeller as recently stated) and linter; machinery order placed.

Tex., Sherman.—Worth Refining Co. organized with Nat B. Brice, Sherman, president; W. D. Reynolds, Fort Worth, Tex., vice-president; Geo. D. Miller, Sherman, general manager; will manufacture cottonseed oil and its products. (Recently reported incorporated with \$1,500,000 capital stock.)

DRAINAGE AND IRRIGATION

Ark., Earl.—Commissioners Blackfish Drainage District, H. F. Avery, chairman, awarded contract to R. H. & G. A. McWilliams of Chicago, Ill., to construct drainage system; about 4500 acres to be improved; main canal five miles long; C. B. Bailey, chief engineer, Wynne, Ark.

Ga., Glynn County.—J. V. Phillips, Government engineer, Waycross, Ga., contemplates reclaiming and cultivating 25,000 acres land in Glynn and Camden counties; surveys will be made.

La., Houma.—Julius Funk, Bloomington, Ill., purchased from Louisiana Meadows Co. 10,000 acres swamp lands near Houma for \$80,000; plan is to construct drainage system and sell land to Northern farmers.

La., Jefferson Parish.—Julius Funk of Bloomington, Ill., and Leroy Lusher of Chicago, Ill., purchased from Fairfield Land & Improvement Association 2000 acres land, all but 300 acres of which are flooded; purchase price \$150,000; property has frontage of 32 arpents on river and depth of 80 arpents, with 1000 acres of cultivable land; stated that new owners propose to reclaim swamp in rear and divide entire tract into small farms to be sold to Northerners.

N. C., Lumberton.—Brett Engineering & Contracting Co., Wilson, N. C., (previously noted as contractor), states relative to construction of drainage system in Back Swamp and Jacob Swamp: Work consists of 13 ditches, totaling 52 miles in length (not 5.2 miles, as recently stated), about 48 miles suitable for construction with dipper dredge; will operate two dredging and one excavating plants; drainage by gravity, no pumping plants required; 35,000 acres area in drainage district from Maxton, N. C., to several miles below Lumberton; canals average bottom width 14 feet, top width 27 feet, depth 6½ feet; some embankment, etc.; machinery mainly supplied. (See "Machinery Wanted.")

Tex., Cotulla.—Matt Russell, chairman Cotulla Irrigation District and president of Cotulla Reservoir & Irrigation Co., advises Manufacturers Record his company's plans contemplates construction of storage reservoir in Neuces River valley formed by earth dam 60 feet above stream bed, extending across Neuces River and the valley; dam and concrete wasteway to be 5500 feet along its creek; reservoir storage capacity, 400,000 acre-feet; 20 or 33-mile gravity canal; distribution over 100,000 acres in eastern part of La Salle county. (Recently mentioned.)

Tex., Houston Heights.—City will excavate about 5550 cubic yards earth from two drainage canals and place necessary culverts and

bridges; bids received until July 10; Howe & Wise, engineers, 722-723 First National Bank Bldg., Houston, Tex.; D. Barker, Mayor, 505 Klam Bldg., Houston, Tex.

Tex., El Paso.—El Paso county will vote on \$71,000 bond issue for irrigation system. Address County Commissioners.

Tex., Fort Worth.—Mountcastle Land & Irrigation Co. will develop irrigation project in Pecos field; plans include perfecting present available water supply; has begun grubbing trees and started borings to determine extent of shallow water in vicinity of headwaters; purchased dredge pump and 50-horse-power gasoline engine; contemplates enlarging present water supply; also purchased holdings of Griffin Orchard Co. and other tracts of land. (Recently noted incorporated with \$600,000 capital stock by G. W. Mountcastle and others.)

Tex., Richmond.—Katy-Clodine Drainage District of Fort Bend county defeated \$100,000 bond issue to construct drainage system. Address Katy-Clodine Drainage Commissioners. (Recently mentioned.)

Va., Milford.—T. W. Wood & Son will install overhead irrigating plant at seed farm.

ELECTRIC PLANTS

Ala., Birmingham.—Birmingham Railway, Light & Power Co. will expend \$1,000,000 for improvements; install 10,000-kilowatt horizontal turbine (contract awarded), build additional cooling tower, etc., for power plant, the power-plant betterments costing \$200,000; will lay 400,000 feet of conduits (contract awarded) for underground wires, etc., these betterments costing \$275,000; double-tracking, etc., to be cost of balance of \$1,000,000 improvements; Matthew S. Sloan, assistant to president, in charge.

Ala., Dothan.—City will install proposed electrical machinery, including 350-kilowatt generator set complete; W. F. Thornton, consulting engineer, Birmingham, Ala.; bids received until noon August 5. (See "Water-works" and "Machinery Wanted.")

Fla., Jacksonville.—Okeechobee Company, capital stock \$200,000, incorporated by J. R. Parrott, W. F. Cochran, W. J. Kelly, D. R. McNeill and others; to build electric plants, etc.

Ga., Claxton.—City, J. P. Moore, Mayor, receives bids until 2 P. M. July 25 for material for recently-noted electric system; plans and specifications at offices of C. M. Rushing, Sr., Clerk, and of manager H. S. Jaudon Engineering Co., Box 582, Savannah, Ga. (See "Machinery Wanted.")

Ky., Clinton.—Clinton Water & Light Co., capital stock \$15,000, incorporated by Thomas Emerson, J. L. V. Grenier and P. H. Porter.

Ky., Irvine.—Estill General Utilities Co., capital stock \$250, incorporated by Grant E. Lilly, W. H. Lilly, V. M. Gaines, T. Wallace and J. F. West.

Ky., Taylorsville.—John H. Reid, chairman Town Trustees, will on July 20 receive bids for purchase and sale of franchise to operate electric lighting, heating and power plant; recently noted. (See "Machinery Wanted.")

Md., Centerville.—Town Commission will arrange to construct heat, light and power plant to supply town and parts of Queen Anne's county; proposed to issue \$20,000 of bonds. (Previously mentioned.)

Md., Kensington.—Town contracted with Potomac Power Co. of Washington, D. C., to furnish electric lighting; 60 lamps of 40 candle-power each.

Miss., Vicksburg.—Vicksburg Railway & Lighting Co. taken over by I. C. Elston and W. B. Walker of Chicago, who will make extensive improvements; company wires Manufacturers Record: "I. C. Elston, Jr., New York Life Bldg., Chicago, Ill., can give information."

N. C., Smithfield.—City will construct electric-light plant, etc.; bids received until July 21; Gilbert C. White, engineer, Charlotte, N. C.; James A. Wellons, Mayor. (See "Water-works" and "Machinery Wanted.")

Okla., Hugo.—Bomford Electric Co., capital stock \$3000, incorporated by Wright Bomford, G. Earl Shaffer and John D. Bomford.

Okla., Tulsa.—City will construct substation; E. B. Cline, City Auditor, receives bids until 9:30 A. M. July 12; bids to be made in lump sum for furnishing material and constructing building; bidders to include furnishing and placing all crossarms and insulators inside building as shown on plans; city will furnish brick and foundation blocks; certified check 5 per cent. of bid; proposals on proposal sheets furnished by City Engineer, T. C. Hughes.

Tenn., Maymead (not a postoffice).—W. W. Worley, Vaughnsville, Tenn., will expend

\$4000 to \$5000 to construct 50-horse-power plant recently noted at Mountain City, Tenn. (See "Machinery Wanted.")

W. Va., Grafton.—City will construct electric-light plant; bids received by City Council until 8 P. M. July 29; plans, etc., at offices of W. C. Hanway, City Clerk, and of engineer, Riggs & Sherman Company, Toledo, O. (See "Water-works" and "Machinery Wanted.")

FERTILIZER FACTORIES

Ala., Florence.—Ashcraft, Wilkinson & Co., capital stock \$50,000, incorporated by M. R. Wilkinson, Lee Ashcraft and John Ashcraft.

Ga., Augusta.—Armour Fertilizer Works (main office, Chicago, Ill.) will enlarge fertilizer plant; cost \$5000.

Ga., Savannah.—Florida Fuel & Fertilizer Co. incorporated by F. M. Chisholm, F. T. Saussy, P. M. Holst and others.

Ga., Unadilla.—Unadilla Fertilizer Co. will be incorporated with \$10,000 capital stock by W. T. Spradley and W. C. Griggs of Unadilla and Charles A. Horne of Atlanta, Ga.

FLOUR, FEED AND MEAL MILLS

Ky., Louisville.—White Plume Flour Co., capital stock \$5000, incorporated by W. M. Atkinson, F. W. Lund and W. L. Callahan.

Ky., Edmonton.—New Edmonton Mills, capital \$10,000, incorporated by E. R. Perkins, B. G. Anderson and F. Edward.

Ky., Beaver Dam.—Farmers' Milling Co., capital \$5000, incorporated by A. S. Chinn, J. A. Caldwell and J. H. Williams.

Ky., McQuady.—McQuady Milling Co., capital stock \$15,000, incorporated by F. J. Schaffer, F. and T. Roach.

Ky., McDaniel.—McDaniel Milling Co., capital \$4000, incorporated by J. R. Spencer, S. W. Glasscock and W. J. Glasscock.

Mo., St. Louis.—Bernet, Craft & Kauffman Milling Co. will, it is reported, erect additional buildings to increase capacity of plant.

Okla., Ada.—Ada Milling Co. (recently noted incorporated with \$20,000 capital stock) purchased plant of former Ada Milling Co. and will expend several thousand dollars in improvements; J. Lloyd Ford is president and L. D. Ford vice-president of new company.

Tenn., Newport.—Newport Product Co. plans to install mill for manufacturing bolted corn meal; one floor; 100 to 200 bushels capacity per 10 hours. (See "Machinery Wanted.")

Tex., Fort Worth.—George T. Smith Flour Purifying Co., capital stock \$5000, incorporated by George T. and V. B. Smith of Fort Worth and W. S. Walker of Granbury, Tex.

FOUNDRY AND MACHINE PLANTS

Fla., Tampa.—Motors.—C. B. Burrows of Burrows-Tait Manufacturing Co., 55 Broadway, Beverly, Mass., advises Manufacturers Record company's machines will be first operated in Florida, and assembly plant will be established there; eventually company will have a central plant for manufacturing all parts. (Recently noted to establish plant to manufacture motors for grubbing machines and automobiles.)

Mo., St. Louis.—Machine Shop.—Scullin-Gallagher Iron Co. will build machine shop; awarded contract to Stupp Bros. for 480 tons steel.

Mo., St. Louis.—Engine Shop.—Anheuser-Busch Brewing Association will build engine shop; awarded contract for steel shapes.

Okla., Caddo.—Cotton Chopper, etc.—Oklahoma Cotton Chopper & Implement Co., capital stock \$10,000, incorporated by F. P. Sample, J. W. Crutchfield, J. O. Hartzog, Henry E. Bass and others.

Tex., Dallas.—Road Machine.—Western Wheeled Scraper Co., capital stock \$20,000, incorporated by Fred C. Crane, Graham Stearns and W. I. Babb.

Tex., Dallas.—Bottlers' Machinery.—Bottlers' Machinery Co., capital stock \$2000, incorporated by H. and M. Grosman of Dallas and Fred C. Elman of Chicago, Ill.

Tex., El Paso.—Machinery.—Southwestern Electric & Machine Co., capital stock \$8000, incorporated by Robert McGarragh, E. E. Slaughter, M. F. Grossette and J. H. Knost.

Tex., Plainview.—Machine Shop.—J. N. Donohoo awarded contract to E. L. Kerr to erect machine shop and garage to be occupied by Plainview Auto and Machine Shop, E. E. Roos, proprietor; building 50x130 feet; brick; fireproof; plate-glass front; cost \$8000.

Tex., San Antonio.—Office Machinery.—Texas Office Machinery Co., capital stock \$5000, incorporated by W. C. Bruff, J. P. Ward and Leslie Moore.

Va., Dendron.—Peanut Harvester.—Tide-water Peanut Harvester Corporation, capital stock \$15,000, incorporated; W. H. Pursell, president; Jack Spratley, vice-president; L. E. Johnson, secretary-treasurer.

GAS AND OIL DEVELOPMENTS

Ark., Little Rock.—Arkansas Development Co. incorporated by J. R. Thompson, Fay T. Chew and S. A. Covington.

Okla., Muskogee.—Griffin Oil Co., capital stock \$25,000, incorporated by W. M. Williams and A. T. Hawk of Muskogee and S. F. Griffin of Cleveland, Okla.

Okla., Bristow.—Penn-Oklahoma Oil Co., capital stock \$10,000, incorporated by T. B. Slick, J. G. Slick and W. W. Banks, all of Cushing, Okla.

Okla., Okmulgee.—Dragon Oil Co., capital stock \$10,000, incorporated by E. W. Kimbley, E. B. Owens, Bruce Silberts and others.

Okla., Tulsa.—Associated Petroleum Co., capital stock \$10,000, incorporated by F. W. Smith, John A. McGee of Tulsa, J. C. Smock, Robert H. Searcy and R. L. Simpson of Eu-aula, Okla.

Tenn., Nashville.—Nashville Oil & Gas Co., capital stock \$100,000, incorporated by J. M. Phillips, J. T. Allen, I. H. Cobb and others.

Tex., Childress.—Citizens' Developing Co., U. S. Weddington, secretary-manager (recently noted incorporated with \$25,000 capital stock), will drill test well; bids received until July 15, to be opened July 16. (See "Machinery Wanted.")

Tex., Honey Grove.—Hunt County Oil Co. increased capital stock from \$50,000 to \$100,000.

Tex., Mexia.—Mexia Oil & Gas Co., capital stock \$15,000, incorporated by Julius Nussbaum, Blake Smith, Julius Desenberg and others.

Tex., Mexia.—Central Texas Oil Co., capital stock \$18,000, incorporated by T. F. Smith, Blake Smith, Joel Terrell and others.

Tex., Stamford.—Stamford Developing Co., capital stock \$10,000, organized to drill for gas and oil on Radford tract; H. H. Pennington, president; J. R. Pratt, vice-president; O. P. Harlan, treasurer.

W. Va., Huntington.—Interval Gas & Oil Co., capital stock \$50,000, incorporated by Clarence Sill, George L. Estabrook, M. G. Saunders and others.

W. Va., Moundsville.—Matamas Oil & Gas Co., capital stock \$24,000, incorporated by Norwood Johnston, C. W. McCall, S. W. Meals and others.

W. Va., Parkersburg.—Barnes Run Oil & Gas Co., capital stock \$32,000, incorporated by Charles E. Batson, Frank Cotton, H. M. Campbell and others.

W. Va., West Milford.—West Milford Oil & Gas Co., capital stock \$10,000, incorporated by A. B. Bartlett, W. O. Kennedy, N. B. Farrell and others.

ICE AND COLD-STORAGE PLANTS

Ala., Dadeville.—Dadeville Cotton Oil Co. will install ice plant. (See "Cottonseed Oil Mills.")

Ala., Woodlawn.—D. A. Rippey contemplates, it is reported, building ice plant.

Fla., Cedar Keys.—Cedar Keys Board of Trade is promoting establishment of ice plant.

Fla., St. Petersburg.—Citizens' Ice & Cold Storage Co., H. W. Hibbs, president, purchased N. C. Williams' ice plant at 1st St. and First Ave. South for \$70,000, including buildings, machinery, etc. (Recently reported incorporated with \$100,000 capital stock, etc.)

Fla., Tampa.—Consumers' Ice Co. awarded contract to McGucken & Hyer at \$30,000 to erect cold-storage plant; 91x105x30 feet; fireproof; reinforced concrete; five stories; electric light; plans by Bonfoey & Elliott of Tampa. (Recently mentioned.)

Ga., Augusta.—Augusta Abattoir Co. awarded contract for cold-storage plant; will also install canning plant and ice plant; latter to have daily capacity 25 tons.

Md., Baltimore.—Hiram Winternitz & Son, 221-227 S. Howard St., will remodel warehouse as meat market and install ice plant; awarded contract to John R. Livezey, 5 Commerce St., Baltimore.

Mo., Kansas City.—Clemmons Produce Co. is having plans prepared for produce and cold-storage building; three stories; cost \$100,000.

S. C., Florence.—Mutual Ice, Coal & Wood Co., J. E. Cothran, acting manager, will erect 25-ton ice plant; stockholders will meet July 11, after which plans, character of machinery, etc., will be determined; officers not elected. (Previously noted incorporated with \$5,000 capital stock by J. E. Cothran and others.)

Tenn., Nashville.—Columbia Produce Co. of Columbia, Tenn., purchased Jeans Produce Co.'s plant and will install refrigerating plant.

Tex., El Paso.—Charles Saintmorris is promoting organization of co-operative company to establish 50-ton raw water ice plant.

Tex., Galveston.—Galveston Ice & Cold Storage Co. will expend \$500,000 to erect cold-storage plant; fireproof construction; plans by Widmann & Walsh, St. Louis, Mo.; contract recently noted awarded to Gilsont Construction Co., St. Louis; details previously reported.

Va., Alexandria.—Mutual Ice Co. will enlarge ice plant; issue \$75,000 to \$80,000 of bonds.

IRON AND STEEL PLANTS

Mo., St. Louis.—Steel Castings.—Scullin-Gallagher Iron & Steel Co. awarded contract to erect No. 3 chipping shop, 100x600 feet; also awarded contract for three 10-ton cranes.

Okla., Muskogee.—Muskogee Rolling Mill Co. contemplates establishing rolling mill; concrete and steel; cost about \$125,000; site to comprise 15 acres. Address company, care of Industrial Development Co.

LAND DEVELOPMENTS

Ala., Mobile.—Government Street Farm Land Co., capital stock \$15,000, incorporated by Heyman Gabriel and Leo M. Brown of Mobile and Julius Weibrecht of Newark, N. J.; will develop several hundred acres west of Spring Hill Ave. and Government St.

Ala., Mobile.—City has commissioned E. B. Cooke, Augusta, Ga., to prepare plans for landscape work in Lyons Park, consisting of 10 acres.

Fla., Chuluota (not a postoffice).—Chuluota Company, capital stock \$100,000, incorporated; J. E. Ingraham, president and general manager; M. M. Smith, vice-president; Sidney Harrison, secretary-treasurer; offices at San Augustine, Fla.

Fla., Jacksonville.—Espanola Land Co., capital stock \$25,000, incorporated; Carroll D. Judson, president; E. W. Spencer, secretary; L. W. Strum, treasurer.

Fla., Jacksonville.—J. S. Manning, sales manager Womanada Land Association of Jacksonville and New York, advises that "Jacksonville Pines" (10 miles northwest of Jacksonville) comprises 18,000 acres; will found town of Womanada on section of land in center of tract; arranging to build hotel, 19 cottages, install general store and demonstration farm; improvements under consideration include sash and door factory, grist mill, sawmill, bakery, electric-light plant, automobile service from Womanada to Jacksonville, etc.; also contemplates demonstration farm at Mandeville, where another office will be opened; all communications to be addressed to 71 W. 23d St., New York. (Recently noted organized, etc., capital stock \$300,000; James A. Mandeville, secretary-treasurer.)

Ga., Alexander.—Alexander Land Co. organized to develop Alexander; G. L. McElmurray, president; John P. McElmurray, treasurer; F. L. McElmurray, attorney; Stewart Starr, director and secretary.

Ga., Dublin.—E. Smith & Co. purchased 10,000 acres of land in Appling and Wayne counties and will subdivide into small lots.

Md., Baltimore.—South Beach Land Co., capital stock \$5000, incorporated by Lester L. Stevens (74 Gunther Bldg.), David A. Raiston and J. Morris Orem.

Mo., St. Louis.—Ackerman Farming & Investment Co., capital stock \$25,000, incorporated by Leopold Ackerman, Louis Ackerman, Edward R. Emanuel, John E. Ernst and others.

N. C., Winston-Salem.—H. E. Fries, W. A. Lemly, W. C. Wright, D. T. Chatham and J. C. Buxton purchased 68 acres land and will develop as residential suburb; electric lighting, etc.; contract awarded for grading streets.

N. C., Winston-Salem.—City, R. I. Dallon, Mayor, will vote July 23 on previously-noted \$15,000 bond issue for parks. (See "Road and Street Work.")

S. C., Charleston.—East Shore Development Co., capital stock \$10,000, incorporated; C. B. Huie, president; G. R. Fishburne, secretary-treasurer.

S. C., Charleston.—Beaufain Street Development Co., capital stock \$15,000, incorporated by W. H. Hildenreich, A. J. Burns and E. H. Semken.

S. C., Charleston.—Welling Corporation, capital stock \$1800, incorporated; Paul M. Macmillan, president; A. C. Tobias, Jr., secretary-treasurer.

S. C., Columbia.—Shandon Terrace Co., Harry Cante, president, 1323 Main St. (recently noted incorporated, \$10,000 capital stock), will develop 20 acres in Shandon (suburb); high-class dwellings.

S. C., Spartanburg.—Spartanburg Land Co., capital stock \$1,000,000, incorporated by Johnson City, Tenn.; incorporators are connected with Carolina, Clinchfield & Ohio Railroad, and it is reported new company will be holding corporation for Holston Corporation, now building Clinchfield docks at Charleston and owning lands at Spartanburg for the railway company.

Tenn., El Paso.—Yaleta Improvement Co., capital stock \$18,000, incorporated by Lamar Davis, Winchester Cooley and Frank R. Toblin.

Va., Petersburg.—Dunedin Land Co., capital stock \$15,000, incorporated; J. W. Seward, president; Harvey Seward, vice-president; H. S. Seward, secretary-treasurer.

Va., Sealston.—Rappahannock Valley Farms Corporation, Lee J. Graves, president, Fredericksburg, Va. (recently noted incorporated with \$25,000 capital stock), will develop 200 acres in alfalfa; lands on Rappahannock River, King George county. (See "Machinery Wanted.")

W. Va., Huntington.—Greater Huntington Land Co., capital stock \$100,000, incorporated by G. D. Miller, L. H. Commack, Blair P. Wilson and others.

W. Va., Norfolk-Rosemont Land Co., capital stock \$5000, incorporated by W. B. Phillips and Fred Dixon, Jr., of Donwood; J. W. McClure and V. C. Baxter of Jackson, Va.

LUMBER MANUFACTURING

Ala., Birmingham.—Birmingham Timber Co. will increase capital stock to probably \$100,000 or \$150,000 and build sawmill on timber property in Tuscaloosa county; contemplates purchase of additional timber tracts.

Ala., Moundville.—Powers Bros. & Howell purchased 500 acres timber land about six miles from Moundville and will erect sawmill with daily capacity 25,000 to 30,000 feet; are reported to install planer at Moundville mill.

Ark., Newport.—Muirhead Lumber Co., capital stock \$18,000, incorporated by W. D. Muirhead, G. W. Muirhead and V. O. Jones.

Ark., Okolona.—Chas. Neimeyer Hardwood Lumber Co. (recently noted to build sawmill) states is now adding to present building and installing some purchased machinery for operation, in about three weeks, of plant with 50,000 to 60,000 feet daily capacity; will build four to eight-mile standard-gauge road in about six months and remove plant to main line; may install planing-mill machinery later; not now in market for machinery.

Ga., Boston.—Holland Gin & Lumber Co., capital stock \$10,000, organized to build planing mill, etc.; O. P. Walton, president. (See "Cotton Compresses and Gins.")

La., Clayton.—Case Lumber Co., capital stock \$50,000, incorporated; W. J. Ward, president; A. R. Case, vice-president; A. E. Case, secretary-treasurer.

Mo., St. Louis.—Vandave Sawmill Co. incorporated by P. F. Jolly, Thomas E. Powe, H. Burmister, F. C. Harrington and Granville Hogan; capital stock \$10,000.

Mo., St. Louis.—Big Four Lumber Co. incorporated by John C. McLachlin, Orin F. Pearson and Elizabeth Bayliss; capital stock \$50,000.

Mo., St. Louis.—Pickrel Walnut Co. incorporated by Gus Huston of Blandville, Ill.; W. K. Mertz, Chandlerville, Ill.; Roy E. Pickrel, C. G. Heggall and F. J. Maxwell, all of St. Louis; capital stock \$40,000.

N. C., Brinkleyville.—W. E. Bowers has, it is reported, purchased timber land for \$75,000.

N. C., Statesville.—Somerset Lumber Co., capital stock \$20,000, incorporated by R. A. Gaither and others.

N. C., Waynesville.—Stone, Hershey & Gibson, 776 Broad St., Newark, N. J., advise Manufacturers Record they expect to build sawmill to cut timber recently purchased; J. C. Campbell of United States Spruce Lumber Co., Marion, Va., and O. H. Viall, Waynesville, N. C., will handle erection and laying out of plant; have not determined details.

Okl., Oklahoma City.—Henry Lumber Co., capital stock \$15,000, incorporated by T. F. Sullivan, Thomas Dixon and Robert L. Henry.

Tenn., Sparta.—Southern Lumber & Manufacturing Co., Nashville, Tenn., purchased 4000 acres hardwood timber at \$50,000 for development.

Tenn., Sparta.—Cumberland Lumber Co. purchased 3000 acres hardwood timber land at \$45,000; will develop; install band sawmill with large steam log skidder; has not purchased machinery. (See "Machinery Wanted.")

Tex., Orange.—American Lumber Co., Meriville, La. (lately of Houston, Tex.), Sam Parks of Houston, president, is considering installation of single circular mill at Orange; no definite plans at present; has considerable sunken logs in Sabine River and tributaries; also standing timber in Sabine, Orange and Newton counties.

Va., Dundas.—Dundas Planing Mill Co., capital stock \$10,000, incorporated; J. B. Edmunds, president; A. J. Parrish, vice-president; Milton Wells, secretary-treasurer.

METAL-WORKING PLANTS

Ark., Cotton Plant.—Iron.—Eureka Manufacturing & Sales Co. incorporated with \$10,000 capital stock to manufacture gasoline sadirons; tools purchased; D. H. Echols, president; H. A. Van Dusen, vice-president; W. G. Jones, secretary-treasurer.

Ky., Ashland.—Tinplate.—Southern Sheet & Tinplate Co., capital stock \$50,000, incorporated by E. J., J. W. and D. M. Job.

Ky., Louisville.—Novelties.—Horan Stay Hanger Co., capital stock \$1000, incorporated by George Ogle, Florissa Ogle and George J. Ogle to manufacture metal, sheet and tin novelties.

MINING

Ga., Alexander.—Iron.—Alexander Land Co., G. L. McElmurray, president, contemplates development of brown ore field.

MISCELLANEOUS CONSTRUCTION

Ala., Mobile.—Docks, etc.—Alabama Port Land & Improvement Co. (lately reported incorporated with \$1,500,000 capital stock, etc.) acquired South Mobile Terminal Co.'s land, comprising about 5000 acres; includes Alabama Port, on lower Mobile Bay, more than 4000 acres, fronting bay more than one mile; plans include construction of docks, slips, loading basins, breakwaters, etc.; docks on "herring-bone" plan, including 100x800-foot piers, 150x800-foot slips radiating from main pier 400 feet wide and extending seaward 4000 feet; will build warehouse equipped with electrical machinery for handling freight; awarded contract for dredging channel 35 feet deep by 400 feet wide; Edward M. Hewlett, new company's vice-president, Schneidly, N. Y., recently wired Manufacturers Record that company will "dredge 23-foot deep channel to lower anchorage, build docks, warehouses and coaling equipment." (Recently and previously outlined.)

Fla., Tampa.—Coal Elevator.—Tampa Coal Co., Judy Bldg., will construct coal-discharging plant of 400 to 600 tons capacity per 10 hours; writes to Manufacturers Record: "Character not decided; are open for propositions." Lately mentioned (under "Miscellaneous Enterprises") as contracted for. (See "Machinery Wanted.")

Ga., Augusta.—Levee.—Correspondent advises Manufacturers Record regarding Savannah River levee, for which \$1,000,000 bond issue was recently noted voted: Levee to be 12 miles long, from a distance above city to 9 miles below; average height, 12 to 20 feet; river front and short space of city front to

Co., authorized capital \$2,000,000, incorporated by J. J. McLaughlin and J. F. Johnson of Johnson City, Tenn., and W. L. Lambeth of Bakersville; rumors state this incorporation is in interest of Carolina, Clinchfield & Ohio Railroad.

Tenn., Memphis.—Levee.—Red Fork Levee Board will construct 125,000 cubic yards of levee enlargement work; receives bids until July 20; G. T. Blackwood, president; J. E. Peoples, engineer. (See "Machinery Wanted.")

Tenn., Memphis.—Earthwork.—Government will construct 535,000 cubic yards of earthwork in Upper and Lower St. Francis levee districts; Mississippi River Commission, first and second district, United States Engineer office, Custom-house, Memphis, receives bids until July 20; Clarke S. Smith, Major, Engineers. (See "Machinery Wanted.")

Tex., Beaumont.—Docks.—George W. Smyth Lumber Co. purchased site on river front, and will build docks for handling sand and other river products.

Va., Richmond.—Concrete Wall, etc.—City will construct concrete wall, grade road and riprap slopes of same of Joseph Bryan Park dam; Charles E. Bolling, City Engineer, receive bids until July 5.

MISCELLANEOUS ENTERPRISES

Alabama.—Transportation.—Alabama & New Orleans Transportation Co., capital stock \$1,087,500, incorporated by Raphael Brill and others, Mr. Brill, care of Guggenheimer, Untermyer & Marshall, 37 Wall St., New York, writes to Manufacturers Record: "Not authorized to give any information."

Ark., Pine Bluff.—Creosoting.—Clay & Co., Little Rock, Ark., will probably build creosoting plant, making specialty of creosoted pine ties.

Fla., Tampa.—Cleaning.—Star Cleaning Co., capital stock \$5000, incorporated; will install clothes cleaning and pressing plant; machinery purchased; W. W. Fineren, president; J. W. Blount, vice-president; L. H. Hale, secretary-treasurer.

Ga., Atlanta.—Printing.—Episcopal Church of Atlanta Diocese will erect building on site 50x200 feet to be leased to Southern Ruralist Co.

Ga., Atlanta.—Building Supplies.—Anderson Bros. Co., capital stock \$25,000, incorporated by W. P. and M. M. Anderson to deal in building supplies.

Ga., Lagrange.—Laundry.—Chamber of Commerce awarded contract to Pike Bros. Lumber Co. of Lagrange to erect laundry building; cost \$4000; contracts awarded for machinery costing \$9000; operated by electricity; George W. Dougherty and H. Reeves of Greenville, Tenn., and P. J. Briscoe, Knoxville, Tenn., will lease plant. (Recently mentioned.)

Ga., Milledgeville.—Laundry.—Company will be incorporated to establish laundry; J. W. Stanley will be manager.

Ga., Rome.—Printing.—Glover-Caldwell Printing Co., capital stock \$5000, incorporated by Jule M. Glover, John C. Glover, G. N. Caldwell, J. Albert Sharp and others.

Ky., Newport.—Laundry.—Sanitary Laundry Co. changed name to Atlas Laundry Co. and increased capital stock from \$10,000 to \$20,000.

La., Baton Rouge.—Printing.—D. C. O'Malley of New Orleans, La.; Charles H. Trousdale of Monroe, La., and others contemplate establishing newspaper printing plant.

Mo., Springfield.—Construction.—Crane Construction Co., capital stock \$250, incorporated by D. C. Crane, G. W. Anslinger and K. D. Anslinger.

Md., Baltimore.—Oxyphathor.—Maryland Oxyphathor Co., 916 Equitable Bldg., incorporated with \$250 capital stock by Samuel Fleishman, Joel Fleishman and Samuel S. Kann.

Miss., Jackson.—Abattoir.—City will vote on \$35,000 bond issue to construct public abattoir; A. C. Crowder, Mayor. (Recently mentioned.)

Mo., St. Louis.—Contracting.—Lafayette Contracting Co., capital stock \$8000, incorporated to contract for installation of sewers and water-works and railroad construction; Bernard D. Reilly, president; Henry F. Phelan, vice-president; Paul J. Pasquier, secretary; temporary offices at 14 N. 4th St.

N. C., Oxford.—Laundry.—Charles O. Eakes (recently of Columbia, S. C.) will establish Oxford Steam Laundry.

Okl., Oklahoma City.—Publishing.—J. E. Dyche Publishing Co., capital stock \$5000, incorporated by J. E. Dyche, W. A. Dyche, C. J. Webster and R. O. Weems.

S. C., Blackville.—Mineral Water.—Healing Springs Water & Manufacturing Co., capital

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Mo., Joplin.—Lead and Zinc.—Mary E. Lead & Zinc Co., capital stock \$32,000, incorporated by S. B. McCright, C. H. Judy, T. C. Henritze and others.

Mo., Pierce City.—Zinc.—Bluebell Mining Co., Frank Chesley, president (recently noted incorporated with \$10,000 capital stock), will develop 20 acres; purchased and is installing concentrating machinery at cost of \$10,000; daily capacity about 20 tons cleaned ore.

Mo., Thoms Station (not a postoffice).—Lead and Zinc.—H. O. Neff, W. H. Bohne, Jr., and others of Joplin, Mo., leased 10 acres of mining land from Dan Wilson Mining Co. and will develop.

N. C., Sapphire.—Mica.—Sapphire Mica Co., capital stock \$50,000, incorporated by C. M. Dunn of Sapphire, A. L. Jones and W. B. Farwell of Balsam, N. C., and others.

Okl., Ardmore.—I. O. K. Mining Co., capital stock, \$25,000, incorporated by O. A. Lasher and others.

Va., Augusta County.—Iron.—P. J. McGuire of International Sanitary Co., Pittsburgh, Pa., and others purchased, it is reported, 8000 acres iron land in Augusta and Rockbridge counties, at exceeding \$400,000, from Zinn Iron Mining Co. of Washington, Pa.; Floyd Rose, 901 Fulton Bldg., Pittsburgh, Pa., engineer, who examined property for buyers, writes to Manufacturers Record that later particulars will be stated.

W. Va., Berkeley Springs.—Sand.—Berkeley Springs Sand Co. will rebuild plant recently burned at loss of \$12,000.

be built of concrete; thick bastion on shore side; floodgates at power canal, etc.; plans and specifications being prepared by Nisbet Wingfield, City Engineer, and soon to be ready; contemplated to let first construction contracts within three months.

La., New Orleans.—Canal.—Alabama & New Orleans Canal Co., capital stock \$150,000, incorporated; Henry H. Chaffe, president; George Deogene, vice-president; Alexander Allison, secretary-treasurer.

Miss., Clarksdale.—Levee.—Yazoo-Mississippi Levee Commissioners awarded contract to Martin Jennings to extend Star Landing levee.

Miss., Gulfport.—Anchorage Basin, etc.—Gulfport & Western Railroad, E. M. L. Long, chief engineer, New York, contemplates following improvements in connection with construction of railroad: Independent anchorage basin one mile square; reclamation of intervening space between basin and shore 1 1/2 miles deep, by filling with material pumped out of basin; concrete wall to extend across basin from east to west, separating basin from reclaimed land; concrete pavement over reclaimed land between retaining wall and beach, where iron warehouses and freight sheds can be built on either side; pier north and south through center of basin, one on east side and another on west side; slips from central pier for accommodation of ships; slips to be long enough for two ships on each side and with space between for coal barges, so that they may coal while loading and unloading.

N. C., Southport.—Pier.—Southport Harbor

stock \$40,000, incorporated; W. B. Boylston, president; L. P. Boylston, secretary-treasurer.

S. C., Spartanburg.—E. L. Stallings Company, capital stock \$10,000, incorporated by E. L. Stallings and Otto Zabel.

Tex., San Antonio.—Engraving.—Mills Engraving Co., capital stock \$15,000, incorporated by Lloyd Spencer, R. H. Swearingen and A. T. Mills; acquired engraving plant from Mr. Mills.

Tex., Waco.—Publishing.—News Publishing Co., capital stock \$50,000, incorporated by W. P. Hobby and W. C. Tupper of Waco and Edwin Hobby of Dallas, Tex.

Va., Falls Mills.—Construction.—Walton Construction Co., capital stock \$300,000, incorporated; I. J. Barbee, president, Graham, Va.; Walton Sudduth, vice-president, and W. W. Clwine, secretary-treasurer, both of Falls Mills.

Va., Tip Top.—Mineral Water.—Tip Top Mineral Springs Co., capital stock \$25,000, incorporated; Joseph Kays, president, Roanoke, Va.; J. F. Fox, vice-president, and John Walter, secretary-treasurer, Bluefield, W. Va.

W. Va., Clarksburg.—Construction.—Consolidated Construction Co., capital stock \$25,000, incorporated by L. F. Chalfant, C. P. Sutter, Albert Brertrantz and others.

W. Va., Huntington.—Printing.—Socialist Printing Co., capital stock \$25,000, incorporated by T. A. Swan, W. H. Thompson, Francis Nottor and others.

W. Va., Parkersburg.—Builders' Material.—Parkersburg Builders' Material Co., capital stock \$25,000, incorporated by A. G. Jackson, M. Lytle, M. Kelly and others.

W. Va., Wheeling.—Contracting.—R. L. Byrum's Sons Co., capital stock \$300, incorporated by R. R. Byrum, S. T. Settell, J. C. Moore, George Steer and others.

MISCELLANEOUS FACTORIES

Ala., Dyas.—Yaryan Turpentine Co., Gulfport, Miss., will extract rosin and turpentine products from tree stumps on 16,000 acres land. A. R. Miller, plant manager, advises Manufacturers Record that company does not contemplate building plant at Dyas; may build plant, but not decided on location.

Ala., Montgomery.—Acid Plant.—American Agricultural Chemical Co. (main office, 2 Rector St., New York) will rebuild sulphuric acid plant recently reported burned at loss of \$75,000 to \$100,000.

Ala., Summedale.—Tobacco.—E. Madelo Tobacco Co., capital stock \$75,000, incorporated by J. J. Wood, H. A. Dehluger and W. H. Kramen.

D. C., Washington.—Hangers.—Eagle Hanger Co., capital stock \$50,000, incorporated by Maurice Ackerman, Abraham Biecher and others.

D. C., Washington.—Medicines.—Pulmo Medical Co., capital stock \$100,000, incorporated by Harry F. Smith, Malcolm Cameron, J. W. Davis and others.

Fla., Jacksonville.—Oil Tanks.—Standard Oil Co. (main office, 26 Broadway, New York) has, it is reported, acquired site 200x1250 feet on which to build oil-storage tanks; stated that entire expenditure will be \$65,000.

Fla., Tampa.—Mattresses.—A. R. and I. Addison, Montgomery, Ala., will establish mattress factory.

Ga., Augusta.—Medicine.—Augusta Medicine Co., capital stock \$100,000, organized; J. T. Moseley, president; R. L. Miller, vice-president; F. T. Poynter, secretary-treasurer.

Ga., Macon.—Bakery.—Sears Sanitary Baking Co., capital stock \$10,000, incorporated by Henry Merkel and others.

Ga., Waycross.—Gas.—City contemplates granting 50-year gas franchise to George W. Deen of Waycross and L. M. Aldrich of New York.

Ky., Campbellsburg.—Mailing Device.—Campbellsburg Mailing Device Co., capital \$10,000, incorporated by L. W. Gee, W. H. Honeycutt and P. W. Holman.

Ky., Louisville.—Polish.—L. C. Stege Company, capital stock \$1000, incorporated by George W. Stege, Louis C. Stege and Carolyn O. Stanton to manufacture metal polish.

Ky., Louisville.—Animal Food, etc.—Harry A. Short Company incorporated by Harry A. Short, J. B. Lewman and Anna Huber to manufacture foods and medicine for animals.

Ky., Lagrange.—Royal Manufacturing Co., capital stock \$100,000, incorporated by J. Woodyager, W. T. Sebree, Paul Blackwood and others.

La., Marionville.—Turpentine.—Dixie Tur-

pentine Co. will rebuild plant recently burned at loss of \$3000.

La., New Orleans.—Drugs.—Finlay, Dicks & Co., Ltd., have plans by Favrot & Livaudais, New Orleans, for wholesale drug plant at Magazine and Lafayette Sts.; four stories; fireproof; brick and stone; 75x175 feet; fourth floor for manufacturing plant; will lease building in rear and connect with new building by bridge. (Recently noted plans to remodel building changed.)

Md., Baltimore.—Straw Hats.—Brigham-Hopkins Company, 413-421 W. German St., purchased two warehouses at 409-411 W. German St. and will equip for manufacturing straw hats.

Md., Baltimore.—Candy.—Frederick W. Lipps Company, Calverton Rd. and Hollins St., awarded contract to Hughes & Reynolds, 104 E. Saratoga St., Baltimore, to erect addition to candy factory; 81x71 feet; four stories; brick; stone and iron trimmings; electric light; steam heat; plans by R. H. Hughes. (Recently mentioned.)

Md., Baltimore.—Envelopes.—Oles Envelope Co., B. S. Oles, proprietor, N. W. Cor. Lombard and Frederick Sts., is equipping plant to manufacture machine and hand-made envelopes; specialty, envelopes from lithographed and printed sheets. (Recently noted to manufacture paper bags.)

Mo., Kansas City.—Tire Filler.—American Airless Tire Filler Co., capital stock \$50,000, incorporated by J. M. Griffin, G. E. Nye and G. W. Jerome.

Mo., St. Louis.—Jewelry.—Erber-Plan Manufacturing Co., capital stock \$500, incorporated by Charles S. Erber, Nathan Plan and Ida J. Splenduch.

Mo., St. Louis.—Automatic Cigar Vending Machines.—Sanitary Cigar Salesman Co. incorporated by Maurice O'Connor (St. Louis), G. H. McCham (Maplewood, Mo.) and R. H. Nations (Flat River, Mo.); capital stock \$20,000.

Mo., St. Louis.—Films.—Delor Realty Co. is having plans prepared by Stephens & Pearson, St. Louis, for building; two stories; 26x110 feet; cost \$10,000; leased for five years by Swanson-Crawford Film Co., Century Bldg., and will be equipped for producing moving-picture equipment.

N. C., Greensboro.—Insect Powder, etc.—Champion Manufacturing Co. organized to manufacture powder guns, Paris green for farm use and fly and insect powders.

N. C., Raleigh.—Shirts.—Raleigh Custom Shirt Manufacturing Co., capital stock \$50,000, incorporated by E. C. Hillery, F. B. Arendell, C. R. Towles and others.

N. C., Winston-Salem.—Tobacco.—R. J. Reynolds Tobacco Co. awarded contract to Fogle Bros. Company, Winston-Salem, to erect tobacco factory; four stories; mill construction; steam heat; electric light; slag roof.

S. C., Sumter.—Bakery.—New York Bakery awarded contract to Carr Construction Co., Sumter, to erect brick building; cost \$3000.

N. C., Winston-Salem.—Gas.—Winston-Salem Gas Co., capital stock \$250,000, incorporated by Beverly N. Sullivan, Louis M. Swink and W. E. Moss; will acquire established enterprise.

Tenn., Chattanooga.—Household Necessities.—Papouskin Company, capital stock \$10,000, incorporated by A. B. Downs, Thomas D. Fletcher, W. A. Fairchild and others.

Tenn., Sparta.—Hardware, Singletrees, etc.—Gist Manufacturing Co. organized, \$5000 capital stock, to manufacture hardware and carriage specialties, including Gist's patent spring singletree; J. R. Lee, president; S. J. Jackson, secretary.

Tex., El Paso.—Fireworks.—Genaro Vergara contemplates establishing plant to manufacture fireworks; located at Hill and 1st Sts.

Tex., Beaumont.—Mattresses.—B. Deutser Furniture Co. ordered machinery and will rebuild plant recently noted burned; erect two-story brick 100x120-foot and frame 35x100-foot buildings; plans by F. W. Steinman, Beaumont.

Tex., Longview.—Mattresses.—Longview Mattress Co. (recently noted incorporated with \$12,000 capital stock by M. H. Bivins and others) has not elected officers; buildings completed; install additional machinery, including boiler and engine.

Va., Hampton.—Gas.—Newport News & Old Point Electric Railway Co., Newport News, Va., purchased Hampton, Phoebus & Fort Monroe Gas Co.; C. Loomis Allen of Allen & Peck, New York, will probably be elected president of gas company; latter awarded contract to Fidelity Construction Co., 61 Knickerbocker Bldg., Baltimore, Md., at \$50,000 for betterments, to include water-circulating plant, additional gas and ice manufacturing equipment, etc.

Va., Richmond.—Tobacco.—James T. Patterson, William B. Daniel and others will organize company to establish tobacco factory.

Va., Roanoke.—Nodulized Pyrites.—The Pyrites Co., New York, will build plant to nodulize pyrites cinder; daily capacity, 200 tons; G. W. Gray, manager Roanoke office, in Davis & Stephenson Bldg.

Va., Strasburg.—Car Coupler.—Stark Car Coupler Corporation, capital stock \$100,000, incorporated; C. H. Stark, president; J. E. Eberly, secretary.

W. Va., Wheeling.—Glass Bottles.—Owens Eastern Bottle Co., Toledo, O., has plans for plant heretofore announced; will erect 80x270-foot factory and 400x400-foot warehouse with saw-tooth roof; structural iron; about 1600 tons required and contract awarded at about \$50,000.

MOTORS AND GARAGES

Fla., Tampa.—Garage.—W. F. Ferman will build garage at Franklin and Henderson Sts.; wood, with iron roof; 82x86 feet; cost \$3500; reported to be used by Hodgson & Trezevant.

Ga., Atlanta.—Garages.—S. H. Potts will erect at Peachtree and Linden Sts. two buildings to be occupied by Oakland Motor Car Co.—one for show and sales rooms, other for garage and shop; cost \$50,000; plans by Eugene C. Wachendorf, Atlanta.

Ga., Atlanta.—Garage, etc.—Locomobile Company of America contracted with W. L. Peel of Atlanta for erection of showroom and garage; cost \$40,000; bids received June 25. (Paul Norcross, Candler Bldg., Atlanta, recently noted as opening bids.)

Ga., Atlanta.—Garage and Salesroom.—H. K. Kiecklighter & Co. has plans by Eugene C. Wachendorf, Atlanta, for garage and salesrooms at Peachtree and Linden Sts.; to be occupied by Oakland Motor Co.; three stories; 100x225 feet; three compartments; mill construction; cost \$55,000.

Ky., Louisville.—Garage.—Clark Motor Co. contemplates erecting \$15,000 garage.

Md., Roland Park.—Garage.—Mrs. J. C. Jones will erect garage; two stories; brick; 16x24 feet; fireproof; plans by Edward L. Palmer, Jr., 402 Roland Ave., Roland Park.

Mo., St. Louis.—Automobiles.—Superior-Chicopee Motor Sales Co., capital stock \$15,000, incorporated by Thomas H. Burns, Geo. C. Ward, Henry C. Carr and L. O. Augst.

S. C., Spartanburg.—Automobiles, etc.—Little Automobile Co. incorporated with \$10,000 capital stock (not \$3000 as recently stated); will deal in automobiles, etc.; also conduct vulcanizing plant for retreading and rebuilding auto casings and tubes and manufacturing blow-out patches and other rubber auto accessories; S. C. Little, president-treasurer. (See "Machinery Wanted.")

Tenn., Memphis.—Automobiles.—Southwestern Motor Car Distributing Corporation, capital stock \$50,000, incorporated by J. W. Bonduant, N. S. Burce, George C. Love and others.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Tex., Rockport.—Rockport & Harbor Island Dock & Terminal Railway Co., capital stock \$12,000, incorporated by Chas. G. Johnson of Rockport, J. Frank Davis, R. L. Ball, R. R. Russell and others of San Antonio, Tex.; S. A. Hopkins of Boston, Mass.; E. Cowperthwaite of London, England, and others; plans construction of docks, etc., at Harbor Island for terminal of proposed San Antonio, Rockport and Mexican Railway; construction to include 12-mile railway from Rockport to Harbor Island; Mr. Hopkins wires from San Antonio to Manufacturers Record: "Harbor Island holdings are 4500-foot frontage and 4000 feet deep; preliminary plans are for 5 docks and 6 slips with necessary trackage; dock dimensions, including aprons, 160-foot width by 800-foot length; construction, concrete piling; estimates of cost for docks and buildings not yet completed."

W. Va., Huntington.—J. F. Walsh, general superintendent motive power, Chesapeake & Ohio Railway Co., Richmond, Va., states company's plans for enlargements and improvements to shops are only tentative; nothing definite. (Previously reported to rebuild, remodel and enlarge machine shops, etc.)

ROAD AND STREET WORK

Ala., Athens.—City will grade and construct 8000 square yards cement sidewalk, 725 square yards vitrified brick crosswalk and 650 square yards crushed limestone screening sidewalk; bids received until July 19 (extended date); Lifford Cole, City Clerk; recently noted. (See "Machinery Wanted.")

Ala., Birmingham.—City awarded three contracts for street paving, two to Burkhalter & Co. and one to L. Brooks, both of Birmingham; streets to be improved are Grey St., one block, Thirteenth Ave. North from 24th to 25th St., and 26th St. from Highland to Madison Ave.

Ala., Birmingham.—City will construct 9600 square yards asphalt, asphalt-block, bituminous, brick, concrete or wood-block pavement on First Ave. from 18th to 21st St.; Walter G. Kirkpatrick, City Engineer; bids received July 9. (Recently noted.)

Ala., Greenville.—Butler county will grade and surface with sand-clay about 12 miles State-aid road; expenditure, \$17,000; County Commissioners receive bids until August 7; W. S. Keller, State Highway Engineer, Montgomery, Ala. (See "Machinery Wanted.")

Ala., Roanoke.—Randolph County Commissioners, Wedowee, Ala., awarded contract to Goodrich & Crinkley of Anniston, Ala., at \$3000 to construct State-aid road from Roanoke to Rock Mills, about five miles; total amount to be available, \$10,000.

Ala., Scottsboro.—Jackson county will grade, drain and macadamize part of Crow Creek road; expenditure on State aid, \$4000; at same time will lay balance of road to Tennessee State line, expenditure \$14,000; County Commissioners receive bids until August 6. (See "Machinery Wanted.")

Ark., Little Rock.—City will construct paving in Street Improvement District No. 26 (E. 3d St.); bids received 3 P. M. July 15; plans, etc., at office of district engineers, Ford & MacCrea. (See "Machinery Wanted.")

Ala., Selma.—Dallas county voted \$100,000 bond issue for completion of road system. Address County Commissioners.

Fla., Gulfport.—Town contemplates issuing \$8000 to \$10,000 of bonds, principally for paving sidewalks. Address Town Clerk.

Fla., Jacksonville.—Duval county will pave Lake Shore Blvd. from Ortega Rd. to Old Orange Park Rd.; County Commissioners receive bids until July 19; Gail L. Barnard, County Engineer. (See "Machinery Wanted.")

Fla., Miami.—Dade county contemplates voting on \$50,000 bond issue for road construction. Address County Commissioners.

Fla., Fort Myers.—H. E. Heitman receives bids until August 1 to clear, grade and construct 10 miles water-bound macadam between Whiskey Creek and Punta Rassa; work consists of about 60 acres of clearing, 50,000 cubic yards earth excavation, 185 cubic yards concrete culvert work and 420 feet vitrified pipe. (See "Machinery Wanted.")

Ga., Atlanta.—Special committee of City Council (Harvey Hatcher, Clarence Haverly and others) recommended \$2,000,000 bond issue for street improvements.

Ga., Atlanta.—Fulton County Commissioners will pave half mile of Habersham Rd from Wesley Ave. to Pace's Ferry Rd.

Ky., Bowling Green.—City awarded contract to Southern Asphaltoline Road Co. of Louisville, Ky., to pave two blocks of street.

Ky., Greensburg.—Greensburg & Camp Knox Turnpike Co., capital stock \$17,000, incorporated; will construct 12 miles of road.

Ky., Louisville.—City, John G. Burns, Mayor, will receive bids until 12 noon July 18 for about 23,000 linear feet combined concrete curb and gutter; John McDyer & Sons, engineers, Catlettsburg, Ky. (See "Sewer Construction" and "Machinery Wanted.")

Ky., Mt. Sterling.—City will construct 4700 square yards brick paving; also curb and gutter; let contract at City Council chamber at 7:45 P. M. July 22; W. A. Samuels, Mayor. (See "Machinery Wanted.")

Ky., Pikeville.—City Engineers, Amick & Haynes, advise that bids will be received until 6 P. M. July 25 for recently-noted (about) 15,000 square yards brick pavement on concrete base; also curb, gutter and drainage. (See "Machinery Wanted.")

La., New Orleans.—City awarded contract to Standard Paving Co. of New Orleans at \$35,319.10 to pave Frenchmen St. from Claiborne to Marigny St. with Sicilian rock asphalt; also at \$19,265.20 to lay subsurface drains, etc., on same street; Charles R. Kennedy, City Comptroller. (Call for bids lately noted.)

La., New Iberia.—City awarded contract to Chatham Construction Co. at \$16,335 to pave E. Main St. with sand and gravel from Weeks St. to Jefferson Rd.; 6250 feet.

Md., Baltimore.—City awarded contract to United States Asphalt Refining Co., Brooklyn, Md., for asphalt paving.

Md., Easton.—City awarded contract to Elder Paving & Contracting Co., 524-526 Law Bldg., Baltimore, Md., to pave streets; ma-

terials, crushed trap rock and bituminous cement; cost about \$150,000.

Miss., Greenwood.—City will construct 25,182 yards of street paving; vitrified brick, bitulithic or creosoted wood block; work includes 10,500 linear feet concrete curb gutter, 2000 linear feet granite header and 2000 cubic yards excavation; J. S. Allen, engineer; R. H. Hicks, clerk; bond issue previously noted; bids received until August 6. (See "Machinery Wanted.")

Miss., Gulfport.—District No. 3 of Harrison county (including Pass Christian, Miss.) petitioned Supervisors for authority to issue \$15,000 of bonds for road construction.

Miss., Hernando.—De Soto county will let contract for proposed grading August 5; about \$100,000. Address R. C. Clifton, Clerk. (See "Machinery Wanted.")

Miss., Indiana.—Sunflower County Supervisors will issue bonds for road and bridge construction in District No. 3; A. P. Stubblefield, Clerk.

Miss., Macon.—Road Commissioners, District 3, Noxubee county, receive bids until 2 P. M. August 7 for building about 16 miles gravel road and 24.5 miles sand-clay road; plans and specifications at office of commissioners and of engineers, Wheelock Engineering Co., 923 Woodward Bldg., Birmingham, Ala. (Previously noted. See "Machinery Wanted.")

Miss., Macon.—Noxubee county votes July 9 on bond issue for road construction; John A. Tyson, Chancery Clerk.

Miss., Meridian.—Lauderdale County Road Commissioners awarded contract to Healy Construction Co. of McAlester, Okla., to build 7½ miles of Causeville Rd.; sand and clay; \$50,000 bond issue voted.

Miss., Natchez.—Adams County Supervisors adopted resolution to issue \$150,000 bonds for road construction; propose to improve 50 to 70 miles of road.

Miss., Port Gibson.—Claborn County Supervisors awarded contract to H. B. Smith to improve 200 miles of roads.

Mo., St. Louis.—City awarded contract to Murray Construction Co., Knoxville, Tenn., at about \$70,000 to pave portions of 23d, 13th, Osceola and other streets with asphalt; Bambrick Bros. Construction Co. of St. Louis at \$292.62 to pave portion of Kimberly St. with brick.

Mo., West Plains.—West Plains Special Road District will grade and construct rock roads; cost \$30,000; J. A. Shepard, official in charge; bids invited; bond issue of \$30,000 recently noted. (See "Machinery Wanted.")

N. C., Murphy.—Garrett W. Scott, engineer, Courthouse Bldg., wires Manufacturers Record that Murphy Township Highway Commission rejected formerly-noted bids for construction of 22,000 square yards macadam; will again open bids July 15. (See "Machinery Wanted.")

N. C., Winston-Salem.—R. I. Dallon, Mayor, states previously-noted election will be held July 23; amounts as follows: Streets, \$100,000; water-works, \$50,000; schools, \$60,000; sewer, \$85,000; parks, \$15,000; hospital, \$30,000.

S. C., Columbia.—Richland county receives bids until noon September 14 for maintaining from October 1, 1912, to May 1, 1913, sections of roads, each one to five miles in length; W. F. Muller, supervisor. (See "Machinery Wanted.")

S. C., Cedar Springs.—South Carolina Institute for Deaf and Blind commissioned P. J. Beckman Company, Augusta, Ga., to prepare plans for improvements to grounds; work includes macadamized driveways, constructing brick walks, etc.; cost \$11,000.

Tenn., Chattanooga.—City will improve East End Ave. from McCallie Ave. to 11th St.; paving district No. 156; A. N. Sloan, Commissioner Department Streets and Sewers, Municipal Bldg., receives bids until July 12. (See "Machinery Wanted.")

Tenn., Dyersburg.—Dyer county will vote on \$150,000 bond issue to construct road from north boundary line of county to south; this to be portion of proposed road from Memphis, Tenn., to Fulton, Ky. Address County Commissioners.

Tenn., Johnson City.—City will construct proposed street paving; brick asphalt, bitulithic, wood block, granitoid, asphaltic concrete, concrete or tarvia for improvement districts Nos. 11, 12 and 13; plans and specifications in office of City Engineer; P. F. McDonald, City Commissioner; bids received July 18. (See "Machinery Wanted.")

Tenn., Lookout Mountain.—Town votes August 8 on \$25,000 bond issue to macadamize and pave streets. Address Town Commissioners. (Recently mentioned.)

Tenn., Nashville.—Louisville & Nashville

Turnpike Co., capital stock \$2500, incorporated by A. R. Mathes, T. M. Hart, C. M. Ferris and others.

Tex., Atlanta.—City voted issuance of \$35,000 road bonds. Address The Mayor.

Tex., Cotulla.—City will construct 4000 square feet cement sidewalks; bids invited; for specifications address T. R. Keck. (See "Machinery Wanted.")

Tex., Corpus Christi.—City accepted plans and specifications of city engineer Arthur Philbrick for paving 150 blocks. Clark Pease, Mayor, states about \$400,000 is available for street improvements, including paving; bids to be opened about August 10. (See "Machinery Wanted.")

Tex., El Paso.—El Paso county will vote on \$15,000 bond issue to extend county road 25 miles. Address County Commissioners.

Tex., Ferris.—Ferris District of Ellis county votes August 10 on \$100,000 bond issue for road construction. Address County Commissioners, Waxahachie, Tex.

Tex., Kaufman.—Terrell-Elmo Commissioners' District of Kaufman county defeated \$200,000 bond issue for road construction. Address County Commissioners. (Recently mentioned.)

Tex., San Angelo.—City will pave 23,000 square yards with creosoted pine blocks; bids to be opened July 15; \$100,000 available; J. J. Goodfellow, City Engineer. (See "Machinery Wanted.")

Tex., San Angelo.—Tom Green county voted \$70,000 bond issue for road and bridge construction. Address County Commissioners.

Tex., Taylor.—City voted \$25,000 bond issue to pave streets. Address The Mayor. (Recently mentioned.)

Va., Dublin.—Dublin Magisterial District will vote July 30 on \$100,000 bond issue for road construction. Address Road Commissioners. (Previously noted.)

Va., Norfolk.—City will regulate and pave portions of 10th St., Colley Ave., 13th, 14th and 15th Sts. and Tunstall Ave.; bids received until July 18; W. T. Brooke, City Engineer. (See "Machinery Wanted.")

Va., Richmond.—City received bids until 3 P. M. July 10 for asphalt block, wood block, bituminous macadam, sheet asphalt, bitulithic or prepared granite block paving on Broad St.; appropriation \$50,000; Chas. E. Bolling, City Engineer.

Va., Richmond.—City will construct concrete wall, grade road and riprap slopes of same at Joseph Bryan Park dam; Charles E. Bolling, City Engineer, receives bids until July 5.

Va., Staunton.—South River district of Augusta county voted \$250,000 bond issue to construct about 75 miles of road; water-bond macadam; date of opening bids not set; officials in charge, Board of Supervisors, Staunton; P. St. J. Wilson, State Highway Engineer, Richmond, Va. (Recently mentioned.)

Va., Warrenton.—Cedar Run District of Fauquier county votes August 17 on \$60,000 bond issue, to be supplemented by \$14,000 subscription from automobile fund of Richmond to Washington highway, for construction of macadam road from Stafford county line to Center line district. Address County Commissioners.

SEWER CONSTRUCTION

Ala., Tuscaloosa.—City awarded contract to Fennell Bros., Tuscaloosa, at \$4903.90 to construct 6-inch and 8-inch sanitary sewers; C. H. Ohme, engineer in charge. (Fennell Bros. recently noted as lowest bidders.)

Ark., Gulon.—Arrangements made for construction of sewer system. Address The Mayor.

Fla., Live Oak.—City issued \$35,000 of bonds to construct sewer system. Address The Mayor.

Fla., St. Petersburg.—City awarded contract to W. B. Williams to lay 1000 feet of sewer in Blocks 5 and 6; depth, 16 feet.

Ga., Fort McPherson.—Government awarded contract to Municipal Engineering & Construction Co. of Chattanooga, Tenn., at \$23,779 to construct sewerage purification plant; consists of 7x14-foot screen chamber, 33x15-foot hydrolytic tank, settling and dosing tanks, sludge drying bed and sprinkling bed, all of concrete construction; about 900 feet water main, fire hydrants, etc.; reconstruction portion of present sewer; construction of about 560 feet 8-inch, 50 feet of 6-inch vitrified pipe sewer; work to commence before June 30; Frank S. Husted, superintendent of construction. Capt. James S. Young, Jr., Constructing Quartermaster. (Recently noted.)

Ky., Louisville.—City, John G. Burns, Mayor, receives bids until 12 noon July 18 for proposed sewer construction; about 1000 feet 30

and 36" single-ring brick sewer and 5400 feet tile sewer; also 23,000 linear feet combined curb and gutter; John McDryer & Sons, engineers, Catlettsburg, Ky.; C. L. Miller, chairman street-improvement committee. (See "Machinery Wanted.")

Md., Baltimore.—City will construct miscellaneous sanitary lateral sewers; 11,000 linear feet vitrified-pipe sewer, 8 to 18 inches diameter, and 6500 linear feet vitrified-pipe house connections; bids received until July 17; Charles England, chairman Sewerage Commission, 904 American Bldg. (See "Machinery Wanted.")

Mo., Hannibal.—City awarded contract to F. L. Hall of Hannibal at \$24,449 to construct sewer in District No. 200.

N. C., Smithfield.—City will construct sewer system, etc.; bids received until July 31; Gilbert C. White, engineer, Charlotte, N. C.; James A. Wellon, Mayor. (See "Water-works" and "Machinery Wanted.")

N. C., Winston-Salem.—City, R. I. Dallon, Mayor, will vote July 23 on previously-noted \$85,000 bond issue for sewer construction. (See "Road and Street Work.")

Okla., Tulsa.—City will construct concrete or brick storm sewer, concrete pipe storm sewer, etc.; bids received July 12 at office of E. B. Cline, City Auditor; plans, profiles and specifications on file with City Engineer, T. C. Hughes. (See "Machinery Wanted.")

S. C., Anderson.—City awarded contract to Robert L. Kay to construct sewer from Anderson College to Rocky River; 6000 feet; cost \$3100.

S. C., Greenville.—City will construct sanitary sewer extensions; work includes 10,000 linear feet 8-inch, 3000 linear feet 15-inch pipe sewers, 265 vertical feet manholes and 2500 cubic yards rock excavation; cost \$35,000; bids received until July 22; W. E. Beattie, chairman; C. P. Ballinger, City Engineer. (See "Machinery Wanted.")

Tenn., Johnson City.—City will receive bids July 18 for sewer construction in connection with proposed paving in improvement districts Nos. 11, 12 and 13. (See "Road and Street Work" and "Machinery Wanted.")

Tex., Fort Worth.—City awarded following contracts for storm sewer construction: F. A. Johnston at \$5168.75, Jarvis St. sewer; B. F. & C. M. Davis at \$6580.70 and \$3084.25, respectively, sewers on De Zavalla and Lipscomb Sts. (Recently noted.)

Tex., Jefferson.—Jefferson Sanitary Sewer Co., capital stock \$2000, incorporated by Geo. S. Heidermeyer, M. J. Whelan, Fred Melsenheimer and others.

TELEPHONE SYSTEMS

Ala., Wetlowe.—Wodley Telephone Co., capital stock \$2000, incorporated by J. M. Welch, R. W. Thompson, H. L. Simpson and others.

Ark., Clarksville.—Johnson County Telephone Co., capital stock \$15,000, incorporated by Edward Cronk, C. J. Farnsworth and S. H. Logan.

Ky., Hopkinsville.—Christian-Todd Telephone Co. organized with R. E. Cooper, president; D. G. Edwards, general manager; F. G. Hoge, secretary; purchased properties of Cumberland Telephone & Telegraph Co., Pembroke Home Telephone Co., Todd County Home Telephone and Hopkinsville Home Telephone Co., in Christian and Todd counties; all these to be operated as one company; about 5000 telephones at start; main office, Hopkinsville. (Recently reported incorporated with \$1,000,000 capital stock.)

Okla., Elmwood.—South Flat Telephone Co., capital stock \$2000, incorporated by T. S. Pinnell, P. J. Hiebert and John Sprague.

Okla., Stringtown.—Citizens Telephone Co. (recently noted incorporated with \$2000 capital stock by O. A. Moody and others) will construct 49-mile line.

Va., Richmond.—Southern Bell Telephone & Telegraph Co. (main office, Atlanta, Ga.) is having plans prepared for branch telephone exchange.

TEXTILE MILLS

Ala., Montgomery.—Cotton Goods.—Montgomery Cotton Mills, capital stock \$100,000, incorporated with Horace Stringfellow president and W. B. Tanner secretary-treasurer; buys company of same name, having 6240 ring spindles, 162 broad looms, etc.

Ga., Columbus.—Cotton Cloth.—Meritas Mills will, it is reported, double capacity; present equipment, 11,000 spindles and 270 looms.

Ga., Palmetto.—Duck, etc.—Palmetto Cotton Mills will install additional carding machines; has awarded contract.

Ga., Valdosta.—Sheeting.—Strickland Cotton Mills will invest \$10,000 for additional machinery.

Mo., St. Louis.—Bleachery.—Lowell Bleachery, Lowell, Mass., leased building with 55,000 square feet space on one floor; will install machinery for bleaching textiles; equipment reported to cost \$15,000. (Previously mentioned.)

N. C., Ivanhoe.—Hosiery Yarn.—Ivanhoe Manufacturing Co. will add several thousand spindles; has awarded contract.

N. C., Kannapolis.—Towels, etc.—Cannon Manufacturing Co. (general office at Concord, N. C.) completed construction of foundations for additional mill building; latter to be two stories high, 100x400 feet; previous reports said will install 30,000 to 35,000 spindles; now has 30,000 ring spindles, 900 narrow looms, etc.; will build 4-story addition to bleachery. (Previously mentioned.)

N. C., Shelby.—Sheeting.—Ella Manufacturing Co. awarded contract for additional building to Slattery & Henry of Greenville, S. C., and not to R. A. Brown's Sons as lately stated; has not awarded contracts for cottages; plans for latter not yet prepared; addition to be 80x220 feet and connected to present building by 32x40-foot cross section; awarded contract for 5183 ring spindles and 126 looms to double capacity. (Recently mentioned.)

S. C., Wellford.—Cotton Cloth.—Tucapau Mills will add 900-kilowatt alternating generator, 15-kilowatt exciter, three 900-kilowatt alternating and three 750-kilowatt alternating transformers; has awarded contract.

Tex., McKinney.—Denims, etc.—Texas Cotton Mill Co. will increase capital stock by \$30,000, as stated recently; also issue bonds for \$75,000; intends to duplicate present equipment of 5152 spindles, 162 looms, etc.; details not determined.

Va., Danville.—Denims, etc.—Riverside & Dan River Cotton Mills will add 1250-kilowatt 600-volt turbine outfit, 25-kilowatt 2-unit motor generator set and switchboard; has awarded contract.

W. Va., Wheeling.—Calico Printing.—J. L. Stifel & Sons awarded contract to G. W. Pogue, Wheeling, to erect \$40,000 addition; reinforced concrete; 100x125 feet; three stories; plans by C. W. Bates, Wheeling. (Heretofore mentioned.)

WATER-POWER DEVELOPMENTS

Ala., Decatur.—Chicago and Holland capitalists purchased (from D. W. Day) Clear Creek Falls for \$80,000; will develop by constructing hydro-electric plant, etc.

Ga., Augusta.—E. C. Deal, general manager Augusta-Aiken Railway & Electric Corporation, and associates are reported as to build hydro-electric plant, developing 33,000 horsepower, on Stevens Creek, at cost of \$2,000,000; transmit electricity to Augusta, Savannah and other cities. J. G. White & Co., 43 Exchange Pl., New York, engineers in charge, write to Manufacturers Record: "Do not consider it advisable just at present to issue any details regarding Stevens Creek development."

Okla., Pauls Valley.—Washita Electric Power Co., W. B. Walker, president, Main and Santa Fe Sts., previously noted to construct timber dam across Washita River, decided on concrete dam; probable cost \$550; no bids; company to supply materials and employ superintendent; power-house is built and equipped; A. H. Lee will be engineer in charge of construction from Big Springs, Tex.

Tenn., Columbia.—J. B. Ashton will expend \$10,000 in addition to plant recently noted to develop 400 horse-power; construction by owner. (See "Machinery Wanted.")

Tenn., Sparta.—Tennessee Power Co., Nashville, Tenn., purchased capital stock of Anderson-Tubb Power Co., Sparta Electric Light Co. and Sparta Water Co.; consideration \$85,000. These properties consist of 450-horse-power hydro-electric plant, light plant and water-works; will become part of Tennessee Power Co. and subsidiaries, controlling water-powers at Ocoee, Great Falls, etc. (Details of Tennessee Power Co. heretofore stated.)

Va., Buena Vista.—Clifton Forge Public Service Corporation, Clifton Forge, Va., wires Manufacturers Record: "Have purchased Rockledge Power Corporation, owning two hydro-electric plants and operating at Lexington and Buena Vista, Va.; transmission line contemplated which will connect the four cities; this company (Clifton Forge) now owns and operates steam power plant at Clifton Forge, furnishing light and power to city and railway shops; transmission line about completed to Covington, Va."

Va., Bedford City.—L. B. Randolph of

Virginia Polytechnic Institute, Blacksburg, Va., has been retained to examine, test and make recommendations on condition of hydro-electric power plant owned by Bedford City.

WATER-WORKS

Ala., Dothan.—City is asking bids, to be received until noon August 5, for proposed water-works and electrical machinery, including station building, reinforced concrete reservoir and 8x150-foot chimney; W. F. Thornton, Birmingham, Ala., consulting engineer; B. R. Picher, chairman water-works committee. (See "Machinery Wanted.")

Ark., Gulon.—Arrangements made for construction of water-works. Address The Mayor.

Ark., Heber Springs.—City is having plans and specifications for water-works system prepared by Dickinson & Watkins, 610 State Bank Bldg., Little Rock, Ark.

Ga., Atlanta.—City Council authorized purchase of 14½ acres land at Hemphill Ave. and 14th St., on which to build basin; estimated cost, \$18,000; R. M. Clayton, chief of construction.

Ga., Augusta.—Correspondent advises Manufacturers Record relative to previously noted water-works extensions and improvements: Nisbet Wingfield, City Engineer, in charge of construction, is preparing plans; bids to be asked when specifications are ready; present filter system to be increased from 7,000,000 to 9,000,000 gallons daily; reservoir to be graded and have capacity of 75,000,000 gallons; 8 miles additional water mains. (Bond issue of \$100,000, recently noted voted.)

Ga., Claxton.—City, J. P. Moore, Mayor, receives bids until 2 P. M. July 25 for material for recently-noted water-works; plans and specifications at offices of C. M. Rushing, Sr., Clerk, and of engineer, H. S. Jaudon Engineering Co., Box 582, Savannah, Ga.

Ky., Clinton.—Clinton Water & Light Co., capital stock \$15,000, incorporated by Thomas Emerson, J. L. V. Grenier and P. H. Porter.

Md., Baltimore.—Water Board, City Hall, announced that James W. Armstrong, engineer, New York, will be head of special division to build mechanical filtration plant costing \$1,633,000, near Loch Raven; Ezra B. Whitman, City Engineer. (Lately reported.)

Miss., Biloxi.—City awarded contract to Cooper-Greer Company to extend and improve water-works; \$70,000 bond issue previously voted; E. Barq, chairman water-works committee. (Call for bids lately noted.)

Miss., Seaboard.—Town contemplates installing water-works for 1000 population; now seeking estimates on construction; R. A. Longmire, clerk. (See "Machinery Wanted.")

Mo., Joplin.—City will vote August 13 on \$20,000 bond issue to construct water-works in eastern section of city; Arthur B. Coke, City Engineer; J. F. Osborne, Mayor. (Recently noted.)

N. C., Smithfield.—City will construct water-works, electric-light plant and sewer system; bids received until July 31; Gilbert C. White, engineer, Charlotte, N. C.; James A. Wellons, Mayor. (See "Machinery Wanted.")

N. C., Winston-Salem.—City will vote July 23 on previously-noted bond issue of \$50,000 for water-works; R. I. Dallon, Mayor. (See "Road and Street Work.")

Okla., Purcell.—City will soon invite bids on construction of water-works estimated to cost \$75,000; E. W. De Lay, City Engineer. (Recently noted as having voted \$100,000 bond issue to construct water and electric-light plants.)

S. C., Columbia.—City will construct coagulating basin recently noted; bids received until 10 A. M. July 30; concrete basin, 70x160 feet, divided longitudinally, and 12 feet deep; brick 20x70-foot headhouse; concrete tanks, piping, valves, equipment, etc.; F. C. Wyse, engineer-superintendent. (See "Machinery Wanted.")

Tex., New Castle.—New Castle Reservoir Co., capital stock \$6000, incorporated by T. R. Coffield and Fred Nance of New Castle, J. Perkins of Wichita Falls, Tex., and others.

W. Va., Grafton.—City will construct proposed water and light plant; bids received by City Council until 8 P. M. July 29; plans, etc., on file at offices of W. C. Hanway, City Clerk, and of engineer, Riggs & Sherman Company, Toledo, O. (See "Machinery Wanted.")

WOODWORKING PLANTS

Ala., Brewton.—Sash, Doors, etc.—Cedar Creek Mill Co. has erected factory costing \$25,000; machinery will be installed to manufacture sash, doors and blinds; machinery purchased.

Ala., Tuscaloosa.—Staves.—A. S. Seaman, McMinnville, Tenn., will establish factory; daily capacity, 10,000 staves.

Ark., Des Arc.—Cooperage.—Conran Cooperage Co., capital stock \$20,000, incorporated; O. B. Gwyn, agent.

Ark., Dermott.—Staves.—J. H. Bynum and L. R. Alexander will erect stave mill.

Ky., Frankfort.—Sash, doors, etc.—R. A. Choate contemplates erecting plant to manufacture sash, doors, etc.; operation by electricity. (See "Machinery Wanted.")

Ky., Louisville.—Vehicle Stock.—W. H. Gillette Company will erect addition to plant for forging department; equipment purchased.

La., Monroe.—Staves.—Brown Stave Co. will rebuild drykiln recently burned at loss of \$3300.

Md., Baltimore.—Hardwood Floors, etc.—H. P. Smith, Inc., capital stock \$5000, chartered by Stephen B. Hadsell (of S. B. Hadsell Metal Ceiling Co., 312 N. Paca St.), Henry P. Smith and Myrtle M. Meise.

Mo., St. Louis.—Boxes.—Mound City Box Factory incorporated by James C. Jones, Fred P. and Frank E. Wichard; capital stock \$5000.

Mo., St. Louis.—Showcases and Fixtures.—American Fixture & Showcase Manufacturing Co. purchased four-story building, 32x125 feet, for \$8000, and will remodel.

N. C., Durham.—Spokes.—P. W. Hawkins, Jr., will establish spoke plant.

N. C., Belhaven.—Cooperage.—Interstate Cooperage Co., J. J. Barrett, manager, has purchased plant of Belhaven Lumber Co. and will operate; machinery ordered. Interstate plant (previously noted burned) will not be rebuilt.

S. C., Varnville.—Furniture.—Varnville Furniture Co., capital stock \$15,000, incorporated by L. H. Carter, S. G. Varn and Randolph Murdaugh.

Tenn., Chattanooga.—Coffins and Caskets.—Chattanooga Coffin & Casket Co. will install additional machinery to cost \$4000; machinery purchased; four buildings, costing \$4000, are in course of construction.

Tenn., Memphis.—Cooperage.—Chickasaw Cooperage Co. purchased 14-acre site for plant; will build cooperage with 10-hour output of 2500 barrels; writes to Manufacturers Record: "Have practically arranged for the necessary equipment." (Recently mentioned.)

Tenn., Nashville.—Furniture.—Bonner Furniture Co. organized to establish factory; leased three-story factory building; individual electric motors to operate machinery; T. F. Bonner, president and general manager; Henry F. Glymph, superintendent.

Tenn., Nashville.—Hardwood Flooring.—Charles Morford, C. P. Street and others will establish hardwood flooring plant; will install equipment in buildings formerly used by Prewitt-Spurr Manufacturing Co.

BURNED

Ark., Plainview.—Plainview Hardware Co.'s building; stores of Brooks & Tidwell, Mitchell Bros. and J. T. Foster & Co.; loss \$75,000.

Fla., Key West.—Newton Curry's residence at 206½ Duval St.

Ga., Douglas.—David Ricketson's barn; loss \$5000.

Ga., Crumps Park.—Hephzibah Orphanage building; loss \$4000.

Ky., Hickman.—Ballard Hotel, owned by Joe Ballard; loss \$5000.

Ky., Louisville.—John Diebold & Sons Stone Co.'s sawmill at 16th and Arloget Sts.; loss \$15,000.

Ky., Pewee Valley.—W. N. Jurey's store at Railroad and Central Aves.; loss \$20,000.

La., Monroe.—Brown Stave Co.'s drykiln; loss \$3300.

La., Marionville.—Dixie Turpentine Co.'s plant; loss \$3000.

La., Shreveport.—F. W. Kitterell's residence; loss \$5000; George Johnston's residence, T. Leslie Pennington's residence and E. W. Stebler's residence, joint loss \$15,000.

Md., Landsdowne.—Double dwelling owned by Mrs. M. E. Edler and Nicholas Lesner; loss \$4000.

Md., Eakles Mills.—C. O. Eakle's warehouse and store; loss \$3000.

Md., Fruitland.—Residences of J. C. B. Chatham and E. G. Clark; loss \$4000 each.

N. C., Scotland Neck.—Cotton Oil & Ginning Co.'s seedhouse; loss \$7000.

N. C., Tunis.—About 200 feet of Atlantic Coast Line Railroad's bridge over Chowan River at Tunis; E. B. Pleasants, chief engineer, Wilmington, N. C.

N. C., Winston-Salem.—Building on N. Liberty St. owned by R. T. Holbrook and A. F. Moses; loss \$10,000.

S. C., North Augusta.—North Augusta Box & Crate Co.'s plant; loss \$6000; building owned by J. L. Etheridge; machinery owned by W. B. Toole.

S. C., McClellanville.—Tibwin Lumber Mill, owned by H. G. Leland.

Tenn., Nashville.—Building occupied by W. E. Wright & Co. at Broadway and Second Ave. and owned by William Literer; loss \$10,000.

Tenn., Bryan.—H. N. McAshan's residence; loss \$5000.

Tenn., Dallas.—Sam Wellbaum's residence at 1625 Peabody Ave., owned by M. P. Exline, loss \$3000; Mrs. J. Milton Seay's residence at 1621 Peabody Ave., owned by C. M. Seay, loss \$5000.

Tenn., Fort Worth.—H. B. Francis' building at 108 Houston St.; cost \$4500.

Tenn., Fort Worth.—Fort Worth Bristle & Hair Co.'s plant; loss \$6000.

Tenn., Trinity.—A. R. McDonald's electric light plant; loss \$10,000.

Tenn., Teague.—W. E. Terrell's residence on Ninth Ave.; loss \$3000.

Tenn., Texas City.—R. C. Orendorf's residence; loss \$5000.

Tenn., Stamford.—Mrs. G. K. Ashburn's residence on N. Swenson Ave.; loss \$4000.

Tenn., Waxahachie.—P. A. Ellis' boarding-house; loss \$4000.

Va., Charlottesville.—Residence owned by Mrs. Linda W. Berkeley of Danville, Va.; loss \$4000.

Va., Floyd.—T. G. Howard's store; buildings occupied by M. L. Dalton, B. G. Howard and G. W. Agnew; loss \$10,000.

Va., Riverton.—Riverton Mills Co.'s flour mills.

Va., Suffolk.—Barns, storehouses, etc., owned by R. C. and J. A. Pretlow; loss \$5000.

Va., Winchester.—Empire Theater; loss \$7000.

W. Va., Berkeley Springs.—Berkeley Springs Sand Co.'s plant; loss \$12,000.

DAMAGED BY STORM

Mo., Mexico.—First Methodist Church, loss \$5000; J. W. Cooper & Son's store, loss \$4000.

WRECKED BY EXPLOSION

Ala., Headland.—J. I. Monk Lumber Co.'s sawmill.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Ala., Birmingham.—A. Loventhal will erect \$50,000 apartment-house.

Ark., Little Rock.—Mrs. E. G. Wells is having plans prepared by Frank W. Gibb & Co., Little Rock, for apartment-house at 421 E. 9th St.

D. C., Washington.—James A. Buchanan, 2210 Massachusetts Ave. N. W., has plans by A. B. Mullett & Co., Union Trust Bldg., Washington, for converting building at 1228 Connecticut Ave. into office and apartment building.

D. C., Washington.—Grafton Bailey, 927 Massachusetts Ave. N. W., has plans by J. H. Hoffman, 1019 8th St. N. W., Washington, for apartment-house; two stories; 19x9½ feet; mill construction; hot-water heat; gas and electric lighting; tin roof; cost \$10,000; construction by owner; recently noted under "Dwellings." (See "Machinery Wanted.")

Fla., Tampa.—William S. Oppenheimer, Franklin St., is reported as to erect apartment-house on Hyde Park Ave. between Cleveland St. and Grand Central Ave.; California style; three stories; cost \$15,000.

Ga., Atlanta.—Albert T. Hunt prepared plans for proposed Plaza apartment-house on Monument Circle; three stories.

Ga., Atlanta.—Fitzhugh Knox is reported as to erect apartment-house at Euclid Ave., Hurt St. and Poplar Circle.

Ga., Savannah.—S. E. Wolf will erect three two-story apartment-houses on 32d St.

Ga., Savannah.—Standard Investment Co., George Clarke, manager, will erect two apartment-houses on E. Waldburg St.; front verandas 8x29 feet, with columns; cold and cedar-lined closets; tiled baths.

Mo., Kansas City.—W. Lee Smith will erect apartment building; 38x44 feet; four apartments; brick and stucco; hot-air heat; concrete sidewalks; gravel roof; cost \$4000; plans and construction by owner. (Recently noted under "Dwellings.")

Mo., St. Louis.—F. Rund will erect two-story tenement-house at 2909-11 Missouri St.; cost \$6000.

Mo., St. Louis.—Alfred Cohn will erect business and apartment building on Delmar Blvd.

Mo., St. Louis.—N. B. Howard will erect three-story tenement-house at 5925 Washington St.; cost \$15,000.

Mo., St. Louis.—W. L. Schrader will erect two-story tenement-house at 3205 Potomac St.; cost \$4200.

Mo., St. Louis.—E. S. Cuendet will erect two-story tenement-house at 1405 Blackstone St.; cost \$5000.

N. C., Raleigh.—Gavin Dortch will erect apartment and store buildings. (See "Stores.")

N. C., Rocky Mount.—Gaston Levy has plans by John C. Stout, Rocky Mount, for two tenement-houses; cost \$3000.

Tenn., Memphis.—J. H. DuBose, president of Phoenix Cotton Oil Co., through Harker & Cairns, architects, Memphis, is receiving

bids to erect apartment and store building on Union Ave.; brick; stone finishings; 56x80 feet; three stories; cost \$25,000.

Tenn., El Paso.—Perry-Kirkpatrick Realty Co. will erect apartment-house for W. E. Brickett at 924 Prospect Ave.; two apartments of five rooms each; full basement; cost \$8000.

Tenn., Houston.—Mrs. W. Priester will erect 20-room apartment-house on Clay Ave.; cost \$6000.

Va., Richmond.—Green & Redd are having plans prepared by Alfred C. Bosson, 366 Fifth Ave., New York, for apartment-house at Laurel and Franklin Sts.; fireproof. (Previously noted as to erect nine-story structure, but plans changed.)

ASSOCIATION AND FRATERNAL

Ala., Sylacauga.—Fraternal Hall Association, Inc., E. A. Haumett, president, will erect building to contain lodge, opera-house and offices; 55x110 feet; tin or gravel roof; cost \$8000.

Ark., Clarendon.—Benevolent Protective Order of Elks is having plans prepared by Theo. M. Sanders, Little Rock, Ark., for lodge building.

Ark., Little Rock.—Knights of Columbus will erect lodge building.

Fla., Tampa.—Tampa Lodge No. 708, Benevolent Protective Order of Elks, will receive bids through Holmboe & Lafferty, architects, Empire Bldg., Clarksburg, W. Va., until August 20 to erect lodge building; cost \$100,000. (Recently noted.)

Ga., Atlanta.—Dixie Aerie, No. 338, Fraternal Order of Eagles, will erect lodge building at Marshall and 3d Sts.

Ga., Macon.—Benevolent Protective Order of Elks has plans by Blair, Kern & Adams, Atlanta, Ga., for lodge building at Cotton Ave. and Wall St.; six stories and roof garden; fifth and sixth floors and basement for lodgerooms, Turkish baths, swimming pool, etc.; intermediate floors for stag hotel for lodge members; cost \$75,000. (Recently noted.)

Ga., Waycross.—Carpenters' and Joiners' Union will erect building at Brunel and Reed Sts.; brick construction.

Mo., Joplin.—Landreth Machinery Co. will erect two-story building; upper floor probably for lodgerooms. (See "Stores.")

Mo., St. Louis.—Northwest St. Louis Improvement Association, E. H. Smith, president, will erect store and hall building at Natural Bridge Rd. and Marcus Ave.; lower floor for stores; upper floor for hall.

Mo., St. Louis.—Moolah Temple, Nobles of Mystic Shrine, will erect temple about 60 feet high; white terra-cotta; banquet hall to seat 1500; auditorium to seat 2500; cost \$150,000.

Tenn., Denison.—Independent Order of Odd Fellows will erect lodge building.

Tenn., El Paso.—El Paso Lodge No. 130, Ancient Free and Accepted Masons, rejected all bids to erect temple and will have plans modified and receive new bids; cost about

\$100,000; plans by Trost & Trost, El Paso. (Recently noted.)

Tex., Houston.—Elks' Building Association is being organized to erect lodge building for Benevolent Protective Order of Elks.

Tex., Houston.—Knights of Columbus have plans by Sanguinetti & Staats, Houston, to remodel building at Walker Ave. and Crawford St. for lodge purposes. (Recently noted as contemplating erection of building.)

Va., Amherst.—Independent Order of Odd Fellows and Ancient Free and Accepted Masons plan to erect lodge building to replace burned structure.

BANK AND OFFICE

Ala., Uniontown.—Dr. S. L. Coleman will erect concrete office building.

Ala., Phil Campbell.—J. Gaiser, Russellville, Ark., and others will erect bank building; plans not determined. (See "Machinery Wanted.")

Ark., Pangburn.—Harry Churchill is having plans prepared for brick bank and store building.

D. C., Washington.—James A. Buchanan, 2210 Massachusetts Ave. N. W., will convert building at 1228 Connecticut Ave. into office and apartment building. (See "Apartment-houses.")

Ga., Savannah.—Savannah Trust Co., W. V. Davis, vice-president, will erect office building; character of building, etc., not determined. (Recently noted.)

Ky., Frankfort.—United American Insurance Co. will expend \$10,000 to remodel office building; hollow tile; fireproof construction; terrazzo floors; vaults; skylights; plans by Leo L. Oberwarth, Frankfort. (Recently noted to receive bids until July 6.)

Ky., Louisville.—J. D. Wright (representing capitalists of Chicago, Ill.) is reported as negotiating for site at 5th and Green Sts. to erect office and store building; plans by H. Wolters, Board of Trade Bldg., Louisville, are said to call for 14-story structure; first three stories stone; upper stories pressed brick; marble corridors with mosaic tile floors; interior rooms of hardwood; three elevators; lower floor for stores; upper floors for offices; cost \$300,000.

La., Oak Grove.—Bank of Oak Grove will receive bids July 15 to erect one-story bank and store building; pressed brick; metal roof; steel ceiling; concrete floor; 50x60 feet; plans and specifications at office of Smith & Barthel, architects, 305 C. S. Bank Bldg., Monroe, La., or at office of Bank of Oak Grove; separate bids invited for bank and electrical fixtures.

Md., Hagerstown.—People's National Bank has plans by A. J. Klinkart, Hagerstown, for bank building; Vermont marble; ornamental doorway flanked by marble pillars; single story; cost \$50,000.

Miss., Pittsboro.—First State Bank will erect bank and office building; 25x100 feet; brick.

Tenn., Memphis.—Bank of Commerce & Trust Co. opened bids to erect bank and office building; Noel Construction Co., Calvert and German Sts., Baltimore, Md., is reported as lowest bidder at \$357,000 without and \$420,000 with mechanical equipment; plans by Harker & Cairns, 528 Schmitz Bldg., Memphis, call for 17-story structure; 38x148 feet; fireproof; \$30,000 heating plant; \$15,000 lighting plant. (Previously noted.)

Tex., Ennis.—Citizens' National Bank will erect bank building to replace burned structure. (Previously reported burned.)

Tex., Houston.—Harris County Medical Society is reported as interested in erection of office building for physicians and dentists; six or eight stories; fireproof; auditorium, library, surgical operating-rooms, etc.

Tex., Victoria.—John Welder will award contract in about 30 days to erect bank and office building; 94x90 feet; five stories; fireproof; steel frame; central independent power plant; independent lighting system; three-way prism American lights; two elevators; concrete gravel roof; plans by C. H. Page & Bro., Houston and Austin, Tex. (Previously noted.)

Va., Richmond.—F. P. Loth, Waynesboro, Va., will open bids July 18 to erect building for Chamber of Commerce and Manufacturers' Exhibit; eight stories and basement; 60x100 feet; fireproof; steam heat; cost \$150,000; plans by Carneal & Johnston, Richmond; contractors estimating are J. T. Nuckols, J. T. Wilson, A. M. Walkup, W. A. Chesterman and G. J. Hunt, all of Richmond; Geo. A. Fuller of New York; F. T. Nesbit & Co., Inc., New York, and Washington, D. C.; Metzger & Wells of Philadelphia,

Pa.—and Richardson & Son, Hampton, Va. (Recently noted.)

W. Va., Charleston.—United Fuel Gas Co. will erect office building at Quarrier and Dunbar Sts.; plans not made.

CHURCHES

Ala., Florence.—New Salem-Cumberland Presbyterian Church, Rev. J. K. Eastop, pastor, will erect church.

Ark., Little Rock.—Temple B'nai Israel, Dan Daniels, president, has plans by C. L. Thompson, Little Rock, for improvements to temple; will provide balcony to replace present one with seating capacity of 250; will also increase capacity of lower floor; has plans by Theo. Sanders, Little Rock, for \$2000 chapel, vault to accommodate four bodies, sexton's house and waiting-room at cemetery.

Ark., Newport.—Baptist Church will expend \$15,000 to erect edifice; 48x125 feet; brick; fireproof; steam heat; electric lighting; plans by Mr. Bonnell of Newport; W. W. Snetzer will supervise construction. (Recently noted.)

Fla., Miami.—Board of Trustees of Northern Methodist Church will erect edifice at 9th St. and Avenue B.

Ky., Louisville.—Church of Our Merciful Saviour (colored) will erect edifice to replace burned structure; cost \$25,000. Address The Pastor, Church of Our Merciful Saviour.

La., New Orleans.—First Church of Christ, Scientist, will erect edifice; R. C. Love is interested.

Md., Baltimore.—Broadway Methodist Episcopal Church, Rev. H. F. Downs, pastor, 14 S. Broadway, will, it is reported, expend \$3000 for improvements to edifice.

Md., Frederick.—Ashbury Methodist Episcopal Church, Rev. L. J. Valentine, pastor, will erect edifice.

Mo., Kansas City.—Linwood Boulevard Methodist Episcopal Church, Rev. E. Comble Smith, pastor, 2916 Olive St., has plans by Smith, Rea & Lovitt, Kansas City, for edifice at Linwood Blvd. and Olive St.; English-Gothic style; native stone, with cut-stone trimmings; seating capacity 1000; cost \$100,000. (Previously noted.)

N. C., Charlotte.—Second Presbyterian Church, Rev. A. A. McGee, pastor, will expend \$5000 for interior improvements to edifice, to include repainting and decorating, etc.

N. C., Greensboro.—C. C. McLenn, chairman of building committee of Westminster Presbyterian Church, 225½ S. Elm St., will receive bids until July 15 to erect edifice; steam heat; tin roof; cost \$25,000; plans by Hook & Rogers, Charlotte, N. C.

Okla., Ardmore.—First Christian Church purchased site for erection of edifice; cost \$15,000. Address The Pastor, First Christian Church.

Okla., Guthrie.—Methodist Episcopal Church South, Rev. John R. Abernathy, pastor, will erect edifice.

S. C., Fairfax.—Baptist congregation, G. S. O'Neal, chairman building committee, will let contract August 1 to erect edifice; brick; seating capacity, 500; tin shingle roof; plans by G. Lloyd Preacher, Dyer Bldg., Augusta, Georgia.

Tenn., Knoxville.—Bell Avenue Baptist Church will erect edifice to replace burned structure. Address The Pastor, Bell Avenue Baptist Church.

Tenn., Halls.—Baptist Church is having plans prepared by John Gaisford, Memphis, Tenn., for edifice; brick; trimmed with stone; slate roofing; cost \$10,000.

Tex., Huntsville.—Bids received until July 10 by Rev. R. W. Adams, pastor, to erect Methodist Episcopal church; certified check for \$500, payable to pastor; plans and specifications at office of M. L. Waller, architect, Fort Worth, Tex.; Rev. Mr. Adams, Huntsville, and Edward Norris, 310 First National Bank, Houston, Tex.

Tex., Weimar.—Bids received by Rev. Jos. Szamanski until July 10 to erect brick and stone church; plans at office of Leo M. J. Dielmann, San Antonio, Tex., and at Catholic parsonage, Weimar. (Previously noted.)

Va., Richmond.—First Baptist Church will improve edifice at 11th and Broad Sts.; cost \$4000; C. H. Hagans, chairman of building committee; no general contract to be awarded.

W. Va., McMechen.—James T. Powell, chairman of building committee, will receive bids until July 15 to erect Methodist Episcopal Church; plans and specifications at office of M. F. Giesey, architect, Schmilbach Bldg., Wheeling, W. Va., and at Brotherhood Rooms, McMechen.

CITY AND COUNTY

Ala., Alabama City.—City Hall.—City will vote July 15 on \$50,000 bond issue for city hall, waterworks and sewerage system. Address The Mayor.

Ga., Augusta.—Hospital.—City has plans by G. Lloyd Preacher, Augusta, and Meyer J. Sturm, Chicago, Ill., consulting architect, to erect five hospital buildings and remodel building for medical college of University of Georgia; latter, with new equipment, to cost \$50,000; plans for hospital buildings call for reinforced concrete construction, brick and stone exterior, terra-cotta trimmings; steam heat; electric lighting; electric elevators; administration building to be four stories, 50x100 feet; one hospital building four stories, 51x230 feet; colored hospital building, four stories, 54x202 feet; power plant, laundry and kitchen, two stories, 61x177 feet; will probably erect nurses' home, two stories, 31x125 feet; bids to be advertised; contract probably let within few weeks. (City recently noted as voting \$150,000 bond issue for hospital.)

Ga., Savannah.—Stables.—City will erect stables, blacksmith and wheelwright shops. Address The Mayor.

N. C., Wadesboro.—Jail, etc.—Anson County Commissioners receive bids until July 24 to erect courthouse and jail. (See "Court-houses.")

N. C., Winston-Salem.—Hospital.—City, R. I. Dillion, Mayor, will vote July 23 on previously noted bond issue of \$90,000 for hospital. (See "Road and Street Work.")

Okla., Hobart.—City Hall.—City rejected all bids to erect city hall and directed architect, W. A. Etherton, Stillwater, Okla., to prepare modified plans for same.

Tenn., Cookeville.—Jail.—Putnam County Commissioners will erect \$8000 addition to jail; Jere Whitson, A. W. Boyd, Mike Moore and others, committee.

Tex., Dallas.—Fire Station.—City is having plans prepared by Harry A. Overbeck, Dallas, for fire station on Young St.; about 50x100 feet. (Recently noted.)

Tex., Dallas.—City Hall.—City is having plans prepared by C. D. Hill & Co., Dallas, for city hall; fireproof construction; cost \$475,000. (Recently noted.)

Tex., Fort Worth.—Hospital.—City will vote on \$100,000 bond issue to erect city hospital. Address The Mayor.

Tex., Port Arthur.—City Hall and Fire Station.—City will vote July 16 on bond issue of \$20,000 for city hall and \$10,000 for two fire stations and equipment; G. N. Bliss, Mayor.

COURTHOUSES

Mo., Clayton.—St. Louis County Commissioners opened bids to erect courthouse; Lucke-Bupp Construction Co., St. Louis, Mo., is lowest bidder at \$46,884; plans by J. M. Dunham, 727 Odd Fellows' Bldg., St. Louis, Mo., call for 86x110 feet; reinforced brick; steam heat; slate roof; electric lights. (Recently noted.)

Mo., Cassville.—Barry county voted \$40,000 bond issue to erect courthouse. Address County Commissioners.

N. C., Wadesboro.—Anson County Commissioners receive bids until July 24 to erect courthouse and jail; each bid must be accompanied with letter from surety company stating it will issue \$30,000 bond for bidder if awarded contract; certified check for \$2500; plans and specifications on file with D. M. Johnson, Register of Deeds, Wadesboro, and at office of Wheeler & Stern, architects, Charlotte, N. C.; loaned general contractors at discretion of architects on deposit of \$100; H. B. Allen, chairman. (Previously noted.)

DWELLINGS

Ala., Birmingham.—John S. Turner will expend \$3000 to alter and repair residence at 3424 Highland Ave.

Ark., Okolona.—Charles Neimeyer Hardwood Lumber Co. will erect addition to mill boarding-house and several cottages and barn; construction under supervision of company. (Recently noted under "Hotels.")

D. C., Washington.—Thomas H. Pickford, 1410 G St. N. W., will erect 190 dwellings in block bounded by 3d, 4th, L and M Sts. N. E.; six rooms; will open street between L and M Sts.

D. C., Washington.—H. R. Howenstein, 1314 F St. N. W., will erect dwellings at 243-245-247 G St. N. W.; cost \$9000.

D. C., Washington.—Major Duncan C. Phillips, 1600 21st St. N. W., will expend \$2300 to repair dwelling at 1900 21st St.

D. C., Washington.—Guy S. Zepp, 521 Rock Creek Church Rd. N. W., will erect three

brick dwellings at 1032, 1034 and 1035 Park Rd. N. W.; cost \$6000.

D. C., Washington.—E. D. Hardy, 48 Rhode Island Ave. N. W., will erect dwelling at 2524 1st St. S. W.; cost \$9000.

D. C., Washington.—S. and H. Robbin, 1402 New York Ave. N. W., will erect two residences at 2729 and 2722 14th St. N. W.; cost \$7500.

D. C., Washington.—Harry A. Kite, 1333 G St. N. W., will erect 13 dwellings at 1522-46 D St. S. E.; cost \$28,000.

Fla., Tampa.—Mrs. M. Hazen will erect two dwellings on Hyde Park Pl.; cost \$7000.

Fla., Tampa.—Bessie H. Laney will erect residence on Swann Ave.; cost \$4000.

Fla., Tampa.—S. E. Graves will erect bungalow on Palmetto Ave.; cost \$4000.

Ga., Atlanta.—Miss Melissa May will erect two-story frame dwelling at 171 E. North Ave.; cost \$4500.

Ga., Atlanta.—J. F. Rasford will erect one-story frame dwelling on Randolph St.; cost \$3500.

Ga., Atlanta.—John C. Allen will erect residence at 145 E. 10th St.; two stories; hollow tile; cost \$9000.

Ga., Augusta.—Mrs. A. C. Perkins will erect one-story bungalow on Glenn Ave.; cost \$3200.

Ga., Augusta.—J. A. Cashin will erect two-story frame residence at 929 Telfair St.; cost \$3300.

Ga., Cuthbert.—N. M. Weaver will erect two cottages on Taylor St.

Ga., Cuthbert.—D. E. Teabeaut will erect two-story residence.

Ga., Savannah.—G. J. Orr, 905 E. Henry St., will expend \$5000 to erect dwelling recently noted; two stories; 15 rooms; ordinary construction; gas and electric lighting; tin roof; plans and construction by owner. (See "Machinery Wanted.")

Ga., Savannah.—F. Eicholz will erect number of dwellings and store on Gwinnett St.

Ky., Louisville.—Mary Walter will erect frame dwelling at Barrett and Wickliffe Sts.; cost \$3200.

Ky., Louisville.—F. W. Currey will erect two-story frame dwelling at 103 Pennsylvania Ave.; cost \$3500.

La., Lake Charles.—George T. Lock is having plans prepared by E. W. Phillips, Lake Charles, for residence at Reid and Broad Sts.; site 100x200 feet.

La., New Orleans.—Dr. S. M. D. Clark will erect single two-story residence; cost \$10,000.

La., New Orleans.—A. Marque will erect single cottage; cost \$3500.

La., New Orleans.—Charles Bacher will erect residence; two stories; double; cost \$4000.

La., New Orleans.—Mrs. S. M. Otis will erect residence on Peters Ave.; two stories; cost \$5000.

La., New Orleans.—A. M. Shaw will erect two-story residence on Calhoun St.; cost \$4000.

La., New Orleans.—Mrs. C. Butler will erect frame cottage; cost \$3500.

La., New Orleans.—G. Levy will erect cottage; cost \$3000.

La., New Orleans.—B. L. Holberg will erect two-story double frame residence on Birch St.; cost \$4000.

La., New Orleans.—H. J. Bergeron will erect single cottage on Dupre St.; cost \$3000.

Md., Baltimore.—George Klein, 2909 Lorman St., will erect 20 dwellings on Falls Rd. near Roland Park; two stories; ornamental pressed brick fronts; marble trimmings; cost \$30,000.

Md., Baltimore.—Abraham Wise, 1716 E. Fayette St., will erect two dwellings on Patterson Park Ave. near Bank St.; two stories; brick; 20x44 feet; cost \$4500.

Md., Baltimore.—George C. Frederick, 2538 W. Baltimore St., has plans by Walter M. Gleske, 66 Gunther Bldg., Baltimore, for cottage; 42x40 feet; two and a half stories; frame; cost \$7000.

Md., Crisfield.—Carroll Crockett will open bids July 13 to erect dwelling; 30x40 feet; frame and stucco; hot-water heat; electric lighting; slate roof; cost \$7000; plans by Herbert G. Jory, 1408 Munsey Bldg., Baltimore, Md.

Md., Round Bay (not a postoffice).—Chas. Place, Jr., has plans by George R. Callis, Jr., 55 Kalckerbocker Bldg., Baltimore, for residence; 34x40 feet; frame; hot-water heat; electric lighting; slate roof; cost \$5000.

Mo., Kansas City.—A. F. Robertson, 3041 College St., will expend \$2000 to \$2500 each to erect three 22x26-foot dwellings and three 24x29-foot dwellings; ordinary construction;

hot-air heat; shingle roof; plans and construction by owner. (Recently noted.)

Mo., St. Louis.—F. A. G. Ahrens will erect five two-story dwellings at 4962-74 Berthold St.; cost \$15,000.

Mo., St. Louis.—Ettrick Realty Co. will erect three-story dwelling at 4357 McPherson St.; cost \$8000.

Mo., St. Louis.—Mrs. Rose A. Bambrick will erect three-story 10-room brick dwelling on Westminster Pl.

Mo., St. Louis.—Mrs. Marie Drey will erect \$20,000 residence at Berlin and Euclid Aves.

Mo., St. Louis.—Edna Realty Co. will erect three residences; one to cost \$10,000; others \$8000 each.

Mo., St. Louis.—H. J. Jaeger will erect two-story dwelling at 2274 Red St.; cost \$4600.

N. C., Nashville.—A. A. Ross has plans by H. R. Wagner, Rocky Mount, N. C., for dwelling; 32x49 feet; ordinary construction; fireplaces; electric lighting; shingle roof; cost \$4000; day labor.

N. C., Rocky Mount.—H. L. Brake has plans by John C. Stout, Rocky Mount, for dwelling; cost \$3500.

N. C., Spring Hope.—N. B. Finch has plans by John C. Stout, Rocky Mount, N. C., for dwelling; cost \$5000.

N. C., Gold Rock.—J. D. Carr has plans by H. R. Wagner, Rocky Mount, N. C., for dwelling; 31x56 feet; ordinary construction; electric lighting; slate roof; cost \$4000; day labor.

N. C., Windsor.—J. H. Matthews has plans by John C. Stout, Rocky Mount, N. C., for dwelling; cost \$5000.

Okl., Oklahoma City.—George Brauer will erect residence at 734 W. 14th St.; frame; two stories; cost \$4000.

S. C., Saluda.—Eugene W. Able will let contract August 1 to erect dwelling; two stories and basement; frame; Colonial style; cost \$10,000; plans by G. Lloyd Precher, Dyer Bldg., Augusta, Ga.

Tenn., Louisville.—Charles M. French has plans by W. H. Gildard, Knoxville, Tenn., for dwelling; frame; 11 rooms; colonial porch; cost \$3500.

Tenn., Nashville.—Directors of George Peabody School for Teachers will erect president's residence; cost \$12,000.

Tenn., Nashville.—J. H. Colley will erect stucco dwelling at 317 21st St.; cost \$4000.

Tenn., Nashville.—J. A. Haley will erect residence on 21st Ave.; cost \$6000.

Tenn., Nashville.—J. D. Goodpasture will erect stone veneered residence on Hillshore Rd.; cost \$4500.

Tenn., Nashville.—Mrs. Anna Gunn has plans by Cartwright & Rucker, Nashville, for residence; one and a half stories; cost \$9000.

Tenn., Memphis.—H. L. Coleman is having plans prepared by John Galsford, Memphis, to erect dwelling on Stonewall Pl., north of Poplar Ave.; brick and stone veneer; slate roof; cost \$12,000.

Tex., Beaumont.—V. Weiss will rebuild dwelling; nine rooms; ordinary construction; frame; cost \$3000. (Recently noted burned.)

Tex., Dallas.—P. B. Arrington will erect 10-room brick veneer dwelling at 5109 Gaston St.; cost \$10,000.

Tex., Dallas.—A. O. Ross will erect 10-room frame cottage at 3111 Live Oak St.; cost \$3016.

Tex., El Paso.—J. P. O'Connor will erect residence at California and Oregon Sts.; two stories; eight rooms; yellow pressed brick; cost \$10,000.

Tex., Houston.—F. J. Maret will erect eight-room residence on Courtland Ave.; cost \$8000.

Tex., Houston.—John Blair has plans by F. S. Glover & Son, Houston, for residence on Telephone Rd.; two stories; 10 rooms.

Tex., San Antonio.—J. J. Montano will erect two five room dwellings on Richey St.; cost \$3000.

Va., Lynchburg.—W. B. Jones will erect frame residence on Rivermont Ave.; slate roof; cost \$4000.

Va., Lynchburg.—W. C. Garvin will erect residence on Elmwood Ave.; frame; shingle roof; cost \$6000.

Va., Norfolk.—A. L. Griffin has plans by John C. Stout, Rocky Mount, N. C., for dwelling; brick veneer; hot-water heat; cost \$5000.

Va., Richmond.—Mrs. M. C. Harwood will erect detached brick dwelling on Parke Ave.; cost \$8000.

W. Va., Beckley.—Weaver Coal Co. will erect stone residence for William MacTugart to replace burned structure.

GOVERNMENT AND STATE

D. C., Washington.—Memorial.—Lincoln Memorial Commission, William H. Taft, chairman, commissioned Henry Bacon, 190 Fifth Ave., New York, to prepare plans for Abraham Lincoln Memorial in Potomac Park. (Previously noted.)

La., Franklin.—Postoffice.—Treasury Department, office of Supervising Architect, Jas. A. Wetmore, Acting Supervising Architect, Washington, D. C. Proposals will be received at this office until 3 P. M. August 15 for construction complete (including plumbing, gas piping, heating apparatus, electric conduits and wiring, and interior lighting fixtures) of United States Postoffice at Franklin; two stories and basement; ground area, 3950 square feet; non-fireproof construction; stone and stucco facing; wood cornice; composition roof; drawings and specifications obtainable from custodian of site, or at this office, at discretion of Supervising Architect.

Md., Sykesville.—Hospital.—Springfield State Hospital is having plans prepared by Owens & Sisco, 1605 Continental Bldg., Baltimore, Md., for Goldborough Cottage; three stories; brick; cost \$50,000.

S. C., Reidsville.—Postoffice.—Treasury Department, James Knox Taylor, Supervising Architect, Washington, D. C., opened bids to erect postoffice building; Melton Construction Co., 11th and H Sts. N. W., Washington, D. C., is lowest bidder for construction at \$31,900. (Recently noted.)

W. Va., Fairmont.—Armory.—Acme Land Co. will erect armory to be leased by State for West Virginia National Guards; three stories; brick; cost \$20,000.

HOTELS

Fla., Daytona Beach.—W. A. and L. H. Merryday, Palatka, Fla., will, it is reported, erect hotel.

Ga., Atlanta.—W. F. Wincoff is having plans prepared by W. L. Stoddard, 39 W. 35th St., New York, for hotel; 62x70 feet; 180 rooms and baths; 14 stories; fireproof construction; low-pressure steam heat; electric elevator; tile roof; plans ready in 60 days. (Recently reported.)

Ga., Macon.—Benevolent Protective Order of Elks will erect lodge and hotel building. (See "Association and Fraternal.")

Ga., Waycross.—Waycross Savings & Trust Co., J. T. Darling, chairman of committee on improvements, will receive bids to erect 100-room addition to Phoenix Hotel; cost not to exceed \$40,000; plans and specifications at office of company, 17 Elizabeth St., and D. S. Schureman, architect, 425 La Grande Hotel Bldg., Waycross, on and after July 15. (Recently noted.)

N. C., Lumberton.—Lumberton Hotel Co. will open bids through architect, B. H. Stephens, Wilmington, N. C., August 1, to erect hotel; 90x90 feet; three stories; brick and terra-cotta; composition roof; cost \$35,000. (See "Machinery Wanted.")

N. C., Newbern.—J. B. Blades will erect hotel and store building; architect not selected. (See "Stores.")

S. C., Aiken.—Dr. T. C. Stone will let contract July 20 to erect addition to hotel and remodel old building; two stories; 51x78 feet; brick; tile floors; steam heat; tin roof; plans by G. Lloyd Precher, Dyer Bldg., Augusta, Ga.

Tenn., Memphis.—Horn Bros. purchased four-story building at McCall Ave. and Main St., and will, it is reported, expend \$40,000 to remodel for hotel.

Tex., El Paso.—George Look will remodel Hotel Fisher on San Antonio St.; will install ornamental front, redecorate lobby, install marble counter, plate-glass front and remove several partitions in lobby; will expend \$7000 for dining-room improvements; total cost \$15,000.

Tex., San Antonio.—T. D. Cobbs has plans by H. L. Phelps for addition to Hutchins Hotel; 40x70 feet; cost \$15,000. (Lately noted as having awarded contract.)

Tex., Natallis.—Medina Irrigation Co., San Antonio, Tex., will receive bids to erect hotel; plans and specifications at office of Atlee B. Ayres, architect, 625 Behell Bldg., San Antonio, Tex. (Recently noted.)

MISCELLANEOUS

Ark., Okolona.—Barn, etc.—Charles Nel-meyer Hardwood Lumber Co. will erect barn, etc. (See "Dwellings.")

Ark., Little Rock.—Market, Auditorium, etc. City Market & Arcade Co. organized with \$500,000 capital stock by Fred W. Allsopp, Harry Lasker, Ike Kempner and Chris. Led-widge; leased site Louisiana, Center, 6th and 7th Sts. and will erect building for market,

etc.; will construct arcade avenues running east and west and north and south lined with stores, booths, stalls, etc.; cold-storage warehouse; heating and lighting plant; probably auditorium or convention hall on second floor; concrete and brick; cost \$200,000 to \$500,000; competitive plans invited from architects.

Ga., Augusta.—Undertaking Establishment. F. M. Dugas & Son will erect building for undertaking establishment; three stories; brick; cost \$7000.

Ga., Augusta.—Cotton Platform.—Atlantic States Warehouse Co. will erect cotton platform; cost \$4000.

Ga., Macon.—Clubhouse.—German-American Club of Macon, Louis W. Schelbe, president, plans to erect clubhouse.

Ga., Savannah.—Infirmary.—Georgia Infirmary, Dr. Craig Barrow, superintendent, Abercorn and 35th Sts., will erect infirmary building on Lincoln St. to replace present structure; two stories with wing equipped beds; fireproof; hot-water heat; electric elevators; flat roofing; cost \$50,000; will award contract August 12.

Ky., Louisville.—Orphanage.—German Protestant Orphans' Home, 1232-64 Bardstown Rd., will expend \$5000 for improvements.

La., Kenwood.—Clubhouse.—Harmony Club will erect clubhouse.

La., Shreveport.—Clubhouse.—Shreveport Golf and Country Club will erect \$18,000 clubhouse, links, tennis courts, driveways, etc.

Md., Baltimore.—Auditorium.—Glidden & Friz, 16 St. Paul St., Baltimore, prepared plans for temporary auditorium building at Maryland Ave. and Oliver St. for World in Baltimore movement; two stories; corrugated iron; cost \$15,000.

Mo., St. Louis.—Clubhouse.—St. Louis Woman's Club will expend \$20,000 for alterations and additions to building at 4600 Lindell Ave.; will provide dining-room, kitchen, restrooms and cardrooms.

N. C., Hendersonville.—Hospital.—Patton Memorial Hospital Association adopted plans by H. C. Meyer, Hendersonville, for hospital building; brick; two stories and basement; four wards, operating-room, eight private wards, etc.; steam heat; metal roof; sun parlor; modern hospital sanitary fixtures; cost \$10,000.

S. C., Union.—Hospital.—Dr. R. R. Berry, L. J. Hames, president of Chamber of Commerce, and Dr. T. P. Kennedy are interested in erection of proposed hospital on Church St.

Tenn., Chattanooga.—Parish-house.—Grace Memorial Episcopal Church, Rev. Albert E. Selcer, rector, will erect parish-house at Hickory St. and Kirby Ave.; two stories and basement; auditorium to seat about 300; contain stage, scenery, etc.; gymnasium, bowling alleys and shower baths in basement; temporary chancel for church services; cost \$10,000. (Previously noted.)

Tenn., Memphis.—Clubhouse.—Midway Rod & Gun Club, J. Frank Whitaker, president, will erect clubhouse on Peters Island.

Tex., Forney.—Clubhouse.—Forney Social Club will organize company to erect clubhouse; two stories; brick; 30x80 feet; cost \$3000; cost of electric lighting, \$150.

Tex., Terrell.—Hospital.—Dr. George F. Powell, superintendent, and board of managers of North Texas Hospital for the Insane will receive bids until July 19 to erect two tuberculosis cottages; two stories; brick and concrete; certified check for \$500, payable to Dr. Powell; separate bids for heating, plumbing and wiring, accompanied by certified check for \$100; plans and specifications at G. E. Kelly's grocery and First National Bank.

Va., Richmond.—Hospital.—Drs. Lewis C. Boshier and Charles R. Robins will erect hospital at Stuart Circle, Lombardy St. and Monument Ave.; has plans by C. M. Robinson, Richmond, for six-story-and-basement structure; French renaissance style; red brick; stone trimmings; heating and laundry plants in basement.

W. Va., Fairmont.—Armory.—Acme Land Co. will erect armory. (See "Government and State.")

RAILWAY STATIONS

Ala., Fayette.—Southern Railway, B. Hermann, chief engineer, 1300 Pennsylvania Ave. N. W., Washington, D. C., will erect station.

Ark., Camden.—St. Louis, Iron Mountain & Southern Railway Co., E. F. Mitchell, chief engineer, St. Louis, Mo., will, it is reported, erect \$25,000 depot.

Fla., Miami.—Florida East Coast Railway, J. R. Parrott, president, St. Augustine, Fla., has plans by E. Ben Carter, superintendent maintenance of way, for passenger station and division offices; brick and wood; 35x200

feet; two stories in center, one story at end; electric lights; slate roof; cost \$20,000; will erect platform 1000 feet; station grounds to be graded and parked, 140x1000 feet. (Lately noted.)

W. Va., Morgantown.—Baltimore & Ohio Railroad, F. L. Stuart, chief engineer, Baltimore and Charles Sts., Baltimore, Md., will, it is reported, erect depot.

SCHOOLS

Ala., Birmingham.—Sisters of Perpetual Adoration are conferring with Architect A. O. Von Herbulis regarding proposed convent at Tate Station; four stories; brick and concrete; stone finish; accommodations for 300 pupils; cost \$75,000; Rev. Father Turner, pastor Blessed Sacrament parish, is interested.

Ala., Greensboro.—City voted \$12,000 bond issue to erect school; two stories; fireproof; slate or tile roof; E. P. McCallum, Mayor. (Previously noted.)

Ark., Heber Springs.—R. P. Morrison is preparing plans to erect school; cost \$17,000.

Ark., Higden.—William Dill is preparing plans for two-story brick school.

Fla., Bartow.—Trustees of subschool district No. 7 of Polk county, E. M. Law, chairman, and B. F. Holland, secretary, will receive bids until July 27 to repair grammar school building on Summerlin Institute; specifications at office of Courier-Informant, Bartow.

Fla., Port Tampa City.—George P. Dickinson, chairman Board of School Trustees, will receive bids until July 16 to erect school; plans and specifications at Barker's store, Port Tampa City.

Ky., Louisville.—City will expend \$12,000 for painting, rebuilding walls, repairing roofs, etc., at various schools; Dr. I. N. Bloom, president of Board of Education.

La., Opelousas.—St. Landry Parish School Board is having plans prepared by Stevens & Nelson, New Orleans, La., for school. (Recently noted.)

Md., Baltimore.—St. Joseph's Passionate Church and Monastery, Frederick Ave. Ext., is having plans prepared by Frank & Kavanaugh, 328 N. Charles St., Baltimore, for addition to Whiteford Hall; will equip for gymnasium, etc.; cost \$80,000. (Previously noted.)

Md., Ridgely.—Caroline County Commissioners are having plans prepared by Thos. L. Jones & Son, 410 W. Saratoga St., Baltimore, Md., for addition to Ridgely High School; two stories; brick and stone; hardwood and tile interior finish; 57x78 feet; ordinary construction; one-pipe steam heat; slag roof; cost \$18,000.

Miss., Kossuth.—Board of Education, W. A. McCord, secretary, will expend \$9000 to erect academic building and dormitory for Alcorn County Agricultural High School; former to include six classrooms and auditorium; latter 20 bedrooms, kitchen, bath, etc.; mill construction; steam heat; electric lighting; metal shingle and composition roof; plans by M. M. Alsop, Houston, Miss. (Recently noted to receive bids until July 5.)

Miss., University.—Sealed proposals to erect building and proposals for heating, plumbing and wiring for Educational Building received until July 25 (revised date); two stories and basement; cost \$40,000; plans to be had from office of Ben Price, 518-19 Empire Bldg., Birmingham, Ala., on and after June 29; deposit of \$15 required for plans; certified check for \$300 to accompany building proposal; certified checks for \$75 each with proposals on heating, plumbing and wiring. Address O. F. Lawrence, secretary Board of Trustees. (Recently noted.)

Mo., Kansas City.—City has plans by Charles A. Smith of Smith, Rea & Lovitt, Kansas City, for Northeast high school; four stories without basement; Grecian-Doric style; 10 Carthage stone columns 25x3½ feet to support central pediment; Carthage stone facing at base, with gray rough-faced brick above; gray terra-cotta trimmings; wood only for doors, windows and covering for concrete floors; exterior walls back of facing and interior walls of hollow tile; swimming pool, gymnasium, shower baths, etc.; auditorium 75x55 feet, to seat 1450 people; cost \$500,000. (City recently noted to have voted \$2,000,000 bond issue to erect two high schools, etc.)

Mo., Princeton.—Board of Education has plans by J. H. Felt & Co., New Shubert Bldg., Kansas City, Mo., for high school; bids received until July 11.

N. C., Winston-Salem.—City will vote July 23 on previously-noted \$60,000 bond issue for schools; R. I. Dallon, Mayor. (See "Road and Street Work.")

N. C., Winston-Salem.—Forsyth County

School Board will erect two room school in Cedar Fork district, colored school in West Salem and school in District No. 5, Bellevue Creek township; will also repair schools in District No. 5, Vienna township; District No. 3, Kernersville township; District No. 5, Bethania township; District No. 3, Broadway and South Fork townships and Marvin.

S. C., McBee.—McBee school district voted \$8000 bond issue to erect school. Address District School Trustees.

S. C., Blackville.—Barnwell county commissioned G. Lloyd Preacher, Dyer Bldg., Augusta, Ga., to prepare plans for school building; two stories; brick; 12 classrooms and auditorium; steam heat; plans ready August 1.

S. C., Gramling.—Gramling School District voted \$5000 bond issue to erect school. Address District School Trustees.

S. C., Walhalla.—Walhalla School District voted \$13,000 bond issue to erect school. Address District School Trustees.

Tenn., Capleville.—Shelby County Commissioners, Memphis, Tenn., will erect school; plans by Jones & Furbringer, Memphis, Tenn. (See Tenn., Lucy.)

Tenn., Dayton.—Dayton High School Board will erect addition to high school; two stories; 60x14 feet.

Tenn., Johnson City.—City will erect proposed high school; cost \$55,000. Address The Mayor.

Tenn., Nashville.—Directors of George Peabody School for Teachers will erect president's residence; cost \$12,000.

Tenn., Tellico Plains.—School Board, N. M. McDaniel, secretary, will receive bids until July 15 to erect school; two stories; frame; six rooms and auditorium; low-pressure steam heat; shingle roof; plans by Baumann Bros., Knoxville, Tenn., on file at office of School Board at Tellico Plains. (Recently noted.)

Tex., Bishop.—Bishop Independent School District voted \$35,000 bond issue to erect brick school. Address District School Trustees. (Previously noted.)

Tex., Bryan.—Allen Academy will expend \$20,000 to erect dormitory; 67x78 feet; character of construction not determined; composition roof; plans by Harvey L. Page Company, San Antonio, Tex.; bids opened about July 10. (Recently noted.)

Tex., Cross Plains.—Bids received until July 10 by trustees of Cross Plains Independent School District to erect two-story and basement school; certified check for \$100, payable to S. F. Bond, secretary of board; plans and specifications at office of E. G. Withers, architect, Stamford, Tex., and Cross Plains.

Tex., Cuero.—School Board, F. S. Grimes, president, will receive bids until July 12 to remodel school building; also receive bids until July 18 to erect building; certified check with remodeling bid for \$300 and with new building bid for \$500, payable to Mr. Grimes; separate bids for plumbing, heating and wiring; plans and specifications at office of C. H. Page & Bro., architects, Houston and Austin, Tex.; new building will be three stories, including basement; corridor entire length of building; concrete steps leading to first floor proper; toilets with 32 compartments; boiler-room, manual-training and domestic science departments in basement; auditorium 61x48 feet, with floor and galleries to seat 850; automatic doors; gray brick construction; 12x30 feet; steel window frames; cost \$30,000. (Previously noted.)

Tex., Ennis.—City voted \$13,000 bond issue to erect brick school. Address The Mayor.

Tex., Galveston.—Board of Regents of University of Texas, N. A. Stedman, chairman of building committee, Austin, Tex., will receive bids until July 8 to erect isolation pavilion in connection with medical department of University of Texas at Galveston; certified check for \$500, payable to C. B. Winn, auditor of university; plans and specifications at office of Stowe & Stowe, architects, Galveston.

Tex., Goliad.—City will erect school; 30x60 feet; three stories; stone; mill construction; cost about \$15,000; will probably open bids in August; T. L. Cox, superintendent of schools. (City lately noted as voting \$20,000 of bonds.)

Tex., Grapeland.—Bids received by School Board until July 10 to erect two-story brick school; plans and specifications at office of A. H. Luker, secretary.

Tex., Houston Heights.—School Board opened bids to erect annex to Harvard School; C. H. Winn, Houston, Tex., is lowest bidder at \$19,984 for construction and Van Liew Plumbing Co. is lowest bidder for plumbing at \$5280; ordinary construction; low pressure steam heat; composition roof;

plans by Ollie J. Lohren, Houston; also accepted plans for 10 room annex to Cooley School and will receive bids for this work until July 18. (Recently noted.)

Tex., Prairie Dell.—Prairie Dell School District will issue \$5000 of bonds to erect brick school. Address District School Trustees.

Tex., Rising Star.—Board of Education will receive bids until July 15 to erect three-story school building; plans on file at Rising Star and office of Glenn Bros., Wichita Falls, Tex., or may be had on deposit of \$25.

Tex., San Leon.—City voted bond issue to erect school. Address The Mayor.

Tex., Stamford.—City voted \$25,000 bond issue to erect ward school and eight additional rooms to central school. Address The Mayor. (Recently noted.)

Tex., Terrell.—City will erect three brick schools and provide sewerage systems at white schools. Address The Mayor.

Tex., Woodson.—Woodson Independent School District will expend \$6500 to erect school building; 64x70 feet; rock and frame; heaters; tight metal roofing; plans by C. H. Leinbach, Mineral Wells, Tex.; bids opened July 6. (Recently noted.)

Va., Richmond.—School Board recommended acceptance of bids of Wise Granite Co., Richmond, at \$68,875 to erect Sidney school, and of American Heating & Ventilating Co., Richmond, at \$7588 for heating and ventilating; plans by C. M. Robinson, 112 Deep Run St., Richmond. (Recently noted.)

W. Va., Glendale.—Washington School District defeated \$15,000 bond issue for improvements to Glendale and Fairview schools. Address Board of Education, Moundsville, W. Va. (Recently noted.)

W. Va., Parsons.—City voted \$35,000 bond issue to erect high school; 65x100 feet; ordinary construction; natural gas and electric lights; cement sidewalks; asbestos roof; steam heat; will award contract about July 20; C. J. McKenney of Board of Education of Black Fork District.

STORES

Ala., Birmingham.—G. N. Cooper will erect two-story frame building on 30th St. between 14th and 15th Sts.; cost \$2000.

Ala., Birmingham.—Eugene Fies will erect two-story brick building on Hickory St. and Fairview Ave.; cost \$7500.

Ark., Little Rock.—City Market & Arcade Co., incorporated by Fred W. Allsopp and others; will erect market, store and arcade building. (See "Miscellaneous Structures.")

Ala., Mobile.—L. Hammell will expend \$3000 to repair building at 71 Dauphin St.

Ark., Booneville.—T. A. Lemons will erect brick store on Broadway.

Ark., Booneville.—A. N. Leftwich will erect brick store on Broadway.

Ark., Little Rock.—Justin Matthews will erect 15 stores at Center and 4th Sts.; cost \$20,000.

Ark., Pangburn.—Harry Churchill is having plans prepared for brick bank and store building.

Ga., Atlanta.—Mrs. John W. Akin will erect business building at North Ave. and Peachtree St.; two stories; reinforced concrete; cost \$75,000.

Ga., Atlanta.—Byck Bros. & Co. are having plans prepared by W. T. Downing, Atlanta, to remodel store; will extend present structure in rear to Hilley property and make same two stories, excavate basement and place prism lights under sidewalk, etc.

Ga., Augusta.—Isaac Silver & Bros., Savannah, Ga., will let contract July 15 to erect store building; two stories; 37x275 feet; brick; tin roof; tile floors; plans by G. Lloyd Preacher, Dyer Bldg., Augusta, Ga.

Ga., Griffin.—J. W. Gresham will erect four stores on W. Broadway; pressed brick; each 20x30 feet.

Ga., Macon.—Dr. W. G. Lee will erect commercial building on 3d St.; brick; five stories; fireproof; 109x172 feet; cost \$60,000.

Ga., Macon.—H. C. Kimbrow has plans by P. E. Dennis, Macon, for two stores at Coleman and Montpelier Aves.; cost \$5000.

Ga., Macon.—Will Gunn is having plans prepared by Curran R. Ellis, Macon, to remodel stores at Third and Mulberry Sts.; cost \$4000.

Ga., Savannah.—E. Elcholz will erect store, etc. (See "Dwellings.")

Ky., Hickman.—W. S. Ellison will erect business building; brick.

La., Oak Grove.—Bank of Oak Grove will erect store and bank. (See "Bank and Office.")

Md., Baltimore.—Henry Mayer, 1100 Light St., purchased building at 1107 Light St., and will remodel for addition to present store.

Miss., Pittsboro.—W. T. Scott will erect store building; brick; 28x60 feet.

Miss., Pittsboro.—Pittsboro Mercantile Co. will erect store building; brick; 36x100 feet.

Miss., Pittsboro.—L. W. Harrelson & Son will erect store building; brick; 30x60 feet.

Mo., Joplin.—Landreth Machinery Co. will erect building at 4th St. and Pennsylvania Ave.; two stories; brick and reinforced concrete; first floor for use of company; upper floor probably for lodge rooms; cost \$12,000.

Mo., Kansas City.—E. W. Shields will erect building to be occupied by B. R. Electric Co.; four stories; fireproof; cost \$65,000.

Mo., St. Louis.—H. Bruggemann will erect two-story store building at 4505 Idaho St.; cost \$4000.

Mo., St. Louis.—Amita Land Co. will erect building at 608 Olive St., to be occupied by Erker Bros. Optical Goods Co.; five stories; cost \$33,000.

Mo., St. Louis.—Alfred Cohn will erect business and apartment building on Delmar Blvd.

Mo., St. Louis.—T. Westhus will erect store building at 1530 S. 8th St.; two stories; cost \$5000.

Mo., St. Louis.—Northwest St. Louis Improvement Association will erect store and hall building. (See "Association and Fraternal.")

N. C., Newbern.—J. B. Blades will erect store and hotel building; 50x106 feet; fireproof construction; architect not selected. (Recently noted.)

N. C., Raleigh.—Howell Cobb will erect three stores on West Martin St.; 20x64 feet each.

N. C., Raleigh.—F. P. Tucker estate will erect business building on South Wilmington St.; brick; 26x28 feet.

N. C., Raleigh.—Gavin Dortch will erect store and apartment building for Dr. Thomas Hogg estate; two stories; red brick; limestone trimmings; 68x66 feet; cost \$30,000.

Okla., Oklahoma City.—S. H. Kress & Co., 286 Broadway, New York, are reported as considering erection of store building.

S. C., Aiken.—H. C. Hahn will let contract July 20 to erect two stores; two stories; 50x200 feet; brick; plans by G. Lloyd Preacher, Dyer Bldg., Augusta, Ga.

S. C., Bowman.—Mittle & Shuler will erect business building; two stories.

S. C., Greenville.—Dr. Davis Furman and W. L. Gassaway will erect store building on South Main St.; 110x119 feet; two stories, with temporary roof; walls to support three additional stories; reinforced concrete. (Recently noted.)

Tenn., Memphis.—J. H. DuBose, through Hanker & Cairns, architects, Memphis, is receiving bids to erect store and apartment building. (See "Apartment-houses.")

Tenn., Memphis.—Brown & Borum, N. 2d St., purchased Southern Express Co.'s building on Jefferson Ave. near 4th St., and will remodel for plumbing establishment; two stories; brick.

Tex., Athens.—C. H. Coleman will erect store building; 50x100 feet.

Tex., Conroe.—Still & Co. will erect brick store.

Tex., Conroe.—L. Wahrenberger Company will erect two-story brick business building on courthouse square.

Tex., Dallas.—Young Investment Co. will erect building at 1918 Young St.; two stories; brick; cost \$10,000.

Tex., Dallas.—H. J. Pinkney will erect two-story brick building at 3101-3109 Beckley St.; cost \$30,000.

Tex., Houston.—E. A. Hudson will erect store building at Milam St. and Capitol Ave.; four stories; mezzanine floor in first story; 100x100 feet; fireproof construction; reinforced concrete faced with pressed brick and terra-cotta; plans by F. W. Caulkins, 503 Stewart Bldg., Houston. (Recently noted to cost \$50,000.)

Tex., Houston.—Jesse H. Jones will erect business building on Main St. between Capitol and Rusk Sts.; four stories and basement; cost \$54,000.

Tex., Pleasanton.—P. A. Vance will erect two or three-story brick business building.

Tex., San Leon.—J. W. Charleston, Seabrook, Tex., will erect store building.

Tex., Waco.—Ned Marshall will erect business building; two stories; brick; 50x75 feet.

Va., Portsmouth.—Abe Levitin and Abe Rosenbaum will erect store building on High St.; three stories; brick; cost \$11,000.

W. Va., Wheeling.—Gutman, Gibson & McConnell will, it is reported, expend \$15,000

to remodel Gutman Bldg.; will install new front, flooring, fixtures, electric system, etc.

THEATERS

Md., Baltimore.—H. J. Strentny, 1736 E. Fayette St., has plans by Callis & Callis, 2000 St. Paul St., Baltimore, for moving picture theater at 308 S. Broadway; one story; brick; 22x109 feet; cost \$5000.

Md., Baltimore.—H. P. Roth, 537 Colvin St., is having plans prepared by H. V. Gemmell for vaudeville and moving-picture theater at 322 Forrest St.; one story; brick; stone and terra-cotta trimmings; slag roof; concrete foundation; 20x104 feet.

WAREHOUSES

Ala., Montgomery.—Winter-Loeb Grocery Co. will erect warehouse; two stories; brick; cost \$18,000.

Ga., Moultrie.—Dalton Bros. Company will erect warehouse near A. B. & A. depot; brick; 15,000 square feet floor space; cost \$15,000. (Company recently noted to erect warehouse.)

Ky., Greensburg.—Greensburg Loose Leaf Tobacco Warehouse Co., incorporated with \$15,000 capital stock by J. A. Hubbard, L. W. Conkley, James D. Wilson and Woodson Lewis.

Ky., Lexington.—Louisville (Ky.) Tobacco Warehouse Co. purchased warehouse of Silas Shelburne & Sons for \$48,000 and will improve same; will raise to level of street, erect addition to sales floor to double present capacity; provide additional stable capacity for 400 horses in basement; install offices, etc.

Ky., Lexington.—Silas Shelburne, representing syndicate, is negotiating for site on which to erect tobacco warehouse.

Ky., Lexington.—Burley Tobacco Co. is having plans prepared by F. J. Manley, local representative of Allyn Engineering Co., Cincinnati, O., for warehouse; 600x170 feet; two stories; brick and stone; ornamental front. (Recently noted.)

Ky., Louisville.—Tobacco Realty Co. will erect warehouse to be occupied by Jordan-Owen Tobacco Co.; capacity for 3000 hogsheads of tobacco; cost \$150,000; plans by C. A. Curtin, Louisville. (Previously noted.)

La., New Orleans.—Finlay, Dicks & Co., Ltd., are having plans prepared by Favrot & Lyaudais, New Orleans, for four-story building at Magazine and Lafayette Sts. (See "Miscellaneous Factories.")

Md., Eakles Mills.—C. O. Eakle will rebuild warehouse lately burned; loss \$3000.

Mo., St. Louis.—Standard-Tilton Milling Co. has plans by F. C. Bousack, St. Louis, for warehouse on Scott Ave.; three stories; reinforced concrete.

N. C., Scotland Neck.—Cotton Oil & Ginning Co., W. E. Smith, manager, will rebuild seedhouse reported burned at loss of \$7000.

S. C., Abbeville.—Bonded Warehouse Co., incorporated with \$15,000 capital stock by S. J. Link and E. Harrison.

S. C., McCormick.—McCormick Warehouse Co., incorporated with \$10,000 capital stock by S. H. Talbert, J. M. Talbert, W. H. Britt and others.

S. C., Saluda.—Eugene W. Able will let contract August 1 to erect warehouse; triangular shape; 152x178x65 feet; cost \$12,000; plans by G. Lloyd Preacher, Augusta, Ga.

Tenn., Nashville.—J. A. and O. L. Jones will erect warehouse on Second Ave.; three stories; cost \$6500.

"Tripure" Sanitary Water Still.

The "Tripure" system of providing pure water is described and illustrated in a booklet recently issued by the Sanitary Water-Still Co. of Jamaica, N. Y., with branch office in Washington, D. C. It is stated that this apparatus has been selected by the various departments of the United States Government and many of the world's foremost industrial concerns. It is extensively used on board vessels and in manufacturing plants where pure distilled water is required, as well as in all places where drinking water is required to be purified. The Tripure system may be used in ordinary dwellings or in the largest industrial plants, its range depending upon the number and size of units installed. Tripure apparatus includes water stills of the industrial and household types, cooling apparatus, evaporators for fresh or sea water, condensers, feed-water heaters, pipes, valves and fittings, all with black-tin coating. The Rammel Manufacturing Co. of Alexandria, Va., has just purchased a 1200 gallon per day distilling outfit from the Sanitary Water-Still Co. for use in connection with its bottling plant.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

D. C., Washington.—S. W. Woodward awarded contract to F. T. Nesbitt Company, 816 14th St. N. W., Washington, to erect apartment-house at 219 T St. N. E.; 50x50 feet; fireproof construction; steam heat; electric lighting; cement sidewalks; composition roofing; cost \$45,000; plans by Milburn, Helster & Co., Union Savings Bank Bldg., Washington. (Recently noted.)

Fla., Lakeland.—S. M. Stephens awarded contract to J. R. Talley, Lakeland, to erect apartment-house; 48x90 feet; ordinary construction; fireplaces; electric lighting; tile roof; cost \$8900; plans by W. B. Talley, Jacksonville, Fla. (Recently noted.)

Fla., Orlando.—G. A. Miller, Pettoway Bldg., Tampa, Fla., has contract to erect dwelling and store. (See "Stores.")

Fla., Tampa.—Patrick & McCranie awarded contract to G. A. Miller of Tampa to erect store and apartment building. (See "Stores.")

Fla., Tampa.—J. P. Hardee awarded contract to McGucken & Hyer, Tampa, to erect apartment-house on Ross Ave. near Florida Ave.; two stories; four apartments; 50x90 feet; cost \$6500.

Ga., Savannah.—John O. Kelly awarded contract to W. T. Hussey, Savannah, to erect two-story apartment-house on Hall St.

Mo., St. Louis.—Jesse Morris Realty & Improvement Co. awarded contract to M. Fernich, 111 N. 7th St., to erect two buildings, 40x51 feet, for apartment; cost \$13,000 each; composition roof; cost of heating plant \$1200; plans by Ed F. Nolte, Fullerton Bldg., St. Louis. (Lately noted.)

Mo., St. Louis.—Michael W. Wotli awarded contract to Arthur Hess, Arkansas & Wyoming Sts., St. Louis, to erect tenement-house; two stories; single flats; ordinary construction; gas and electric lighting; composition tar roof; cost \$1000. (Recently noted.)

S. C., Columbia.—Dr. James E. Poore awarded contract to E. T. Summersett, Columbia, to erect tenement-house; 29x20 feet; ordinary construction; rubberoid roofing; cost \$300. (Recently noted under "Stores.")

Va., Richmond.—M. C. Harwood awarded contract to J. R. Jones, Richmond, to erect brick apartment building on Park Ave.; cost \$8000.

W. Va., Wheeling.—Edward Schmehl awarded contract to Porter-Bitzer Company, Wheeling, to erect apartment-house on Jacob St.; three stories; each floor to contain five living-rooms, pantry, private halls, etc.; plans by George H. Rehringer, Wheeling.

ASSOCIATION AND FRATERNAL

Fla., Lakeland.—J. L. Skipper awarded contract to erect postoffice, lodge and office building. (See "Government and State.")

BANK AND OFFICE

Ala., Marion.—Marion Central Bank awarded contract to Thomas Hall, Birmingham, Ala., to erect bank building; two stories; brick; cost about \$12,000; plans by W. E. Bonns, Birmingham, Ala. (Recently noted.)

Fla., Lakeland.—J. L. Skipper awarded contract to erect postoffice, office and lodge building. (See "Government and State.")

Ga., Valdosta.—Exchange Bank awarded contract to G. A. Whitehurst of Valdosta to remodel bank; contract awarded to L. & D. P. Smith of Valdosta for inside marble and fixtures.

Ky., Middlesboro.—Mrs. T. W. Berkley, Lexington, Ky., awarded contract to erect store and apartment building. (See "Stores.")

Md., Baltimore.—Harrison Building Association, 329 N. Gay St., awarded contract to G. W. Bennett, 27 Franklin Bldg., Baltimore, to erect office building at 739 N. Gay St.; one story; brick and stone; slag roof; concrete foundation; electric lights; hot-water heat; cost \$3000; plans by Theodore Wells Pietsch, American Bldg., Baltimore.

Md., Baltimore.—Robert Garrett & Sons awarded contract to Wells Bros. Company, 160 Fifth Ave., New York, to erect office building at South and German Sts.; 13 stories; Indiana limestone; 50x100 feet; fireproof; four elevators; vacuum steam heat; slag and tile roof; cost more than \$300,000; plans by Wyatt & Nolting, Keyser Bldg., Baltimore. (Recently noted.)

Mo., Eureka.—Farmers and Merchants' Bank awarded contract to W. Elias, to erect bank and office building; two stories; brick; 25x60 feet; cost \$4000; plans by W. Wedemeyer, St. Louis, Mo. (Recently noted.)

Tex., Perry.—First State Bank of Perry awarded contract to erect brick building.

Tex., Texarkana.—Texarkana National Bank awarded contract to Steiniger Construction Co., St. Louis, Mo., to erect bank and office building at Broad St. and State Line Ave.; eight stories; stone foundation; first 30 feet terra-cotta; remainder of brick; 25x100 feet; steel frame; fireproof; cost \$150,000. (Previously noted.)

Tex., Terrell.—Harris Brin awarded contract to John McGraw, Terrell, to erect office building; 25x100 feet; fireproof construction; gravel roof; cost \$6000; plans by J. O. Gill, Dallas. (Recently noted under "Stores.")

CHURCHES

La., Shreveport.—First Methodist Church awarded contract to J. W. Slaughter Construction Co., Dallas, Tex., to erect edifice; cost \$81,177. (Recently noted.)

Miss., Ackerman.—Methodist congregation awarded contract to Mr. Harper, Columbus, Miss., to erect edifice. Address The Pastor, Methodist Church.

N. C., Winston-Salem.—Home Moravian Church awarded contract to Fogle Brothers Company, Winston-Salem, to erect addition to edifice; will remove about 40 feet of north wall of present structure and connect with new building; steam heat; electric lights; slate roof; plans by Willard C. Northup, Winston-Salem; cost \$50,000.

Tex., Dallas.—First Methodist Church awarded contract to J. W. Slaughter Construction Co., Dallas, to erect edifice; 75x150 feet; semi-fireproof construction; hot-water heat; electric lighting; tar and gravel roof; plans by Sanguinet & Staats, Fort Worth, Tex.; plumbing, heating and wiring not in general contract. (J. W. Slaughter Construction Co. recently noted as lowest bidder at \$82,000.)

Tex., Deport.—Methodist congregation awarded contract to erect edifice. Address The Pastor, Methodist Church.

Va., Pocahontas.—Jewish congregation, H. Millner, president, awarded contract to Matthews Bros., Graham, Va., to erect synagogue; cost \$5000.

Va., Petersburg.—St. Stephen's Episcopal Church (colored) awarded contract to Wilkinson & Son, Petersburg, to erect edifice on Halifax St.; brick; stone trimmings; Gothic style; seating capacity 300; cost \$11,000; plans by M. P. Andrews & Co., Petersburg. (Recently noted.)

Va., Richmond.—Benedictine Sisters awarded contract to Boyle-Robertson Construction Co., 1516 H St. N. W., Washington, D. C., to erect chapel and residence; 75x50x50 feet; ordinary construction; steam heat; electric lights; tile roof; plans by Maginnis & Walsh, 100 Boylston St., Boston, Mass.; cost \$25,000; subbids wanted by contractors. (Lately noted.)

W. Va., Pocahontas.—Hebrew congregation awarded contract to Matthews Bros., Graham, Va., to erect synagogue.

CITY AND COUNTY

Fla., Clearwater.—Storeroom and Barn.—City awarded contract to W. H. Flecht to erect storeroom and barn; 20x40 feet; corrugated iron; tin roof; cost without equipment \$50,000; plans by W. N. Reece.

Tex., Kyle.—City Hall.—City awarded contract to Milhollen Bros. to erect city hall; 50x60 feet; ordinary construction; tile roof; cost \$4700; plans by Roy L. Thomas, Austin, Tex. (Recently noted.)

Va., Richmond.—Stables.—City awarded contract at \$22,734.61 to J. T. Nuckols, Richmond, to erect city stables; mill construction; slag roof; electric lights; hand elevator; plumbing and sanitary equipment to cost \$1648 additional; plans by Carneal & Johnston, Richmond.

COURTHOUSES

Ark., Little Rock.—Pulaski County Commissioners awarded contract at \$565,587 to R. O. Campbell, Oklahoma City, Okla., to erect addition to courthouse; plans by Geo. R. Mann, Gazette Bldg., Little Rock. (Recently noted.)

Fla., Bushnell.—Sumter County Commissioners awarded contract at \$18,250 to R. D. Waring, Kissimmee, Fla., to erect courthouse; two stories and tower; concrete; pressed brick sides. (Recently noted.)

Fla., Titusville.—Brevard County Commissioners awarded contract at \$29,368 to Light, McDonald & Co., Jacksonville, Fla., to erect courthouse; 83 feet 3 inches by 53 feet 2 inches; two stories; reinforced concrete; four two-story colonial pillars supporting

plaza roof on main entrance; one-story colonial columns at other entrances. (Previously noted.)

Ky., Harrodsburg.—Mercer County Commissioners awarded contract to Falls City Construction Co., Louisville, Ky., to erect courthouse; will use walls of old structure for new building; colonial style; cost \$25,000.

N. C., Salisbury.—Rowan County Commissioners awarded contracts to erect courthouse as follows: General contract at \$99,400 to King Lumber Co., Charlottesville, Va.; steel furniture at \$4527 to General Fireproofing Co., Youngstown, Ohio, and wood furniture at \$4698 to John Wanamaker, Philadelphia, Pa.; plans by A. Ten Eyck Brown, Atlanta, Ga., call for two-story structure; 137x110 feet; pressed brick and stone; terra-cotta trimmings; steam heat; electric lights. (Recently noted.)

DWELLINGS

Ala., Birmingham.—Joy, McGilivray & Currie awarded contract to W. C. Sterling, Birmingham, Ala., to erect four dwellings; eight rooms; frame; composition roofing; furnace heat; electric lighting; plans by Joy Construction Co., Birmingham; cost \$16,000.

Ala., Birmingham.—H. J. Porter, Jr., awarded contract to T. L. Medders & Co. to erect dwelling. (Recently noted under "Stores.")

Ala., Brewton.—O. F. Luttrell awarded contract to H. A. Goodrich, Brewton, to erect residence; two stories; ordinary brick veneer; shingle roof; cost \$6000; plans by Okel & Cooper, Montgomery, Ala. (Lately noted.)

Fla., Kissimmee.—R. D. Waring awarded contract to W. G. Hankins of Kissimmee to erect dwelling; plans (recently noted) prepared by Ludlam & McDonough, Kissimmee. (See "Machinery Wanted.")

Fla., Tampa.—W. E. Dorchester will erect dwelling on Bay Shore Blvd.; hollow tile and brick; cost \$14,000; awarded contract to A. Bashford, Tampa.

Ga., Augusta.—Dr. W. W. Battey, Jr., awarded contract to H. C. Vanormer & Sons, Lexington, S. C., to erect dwelling; two stories and basement; hot water heat; tile roof; cost \$10,000; plans by G. Lloyd Preacher, Dyer Bldg., Augusta. (Previously noted.)

Ga., Augusta.—Mrs. R. Steinberg awarded contract to H. C. Vanormer & Sons, Lexington, S. C., to erect proposed dwelling; three stories; brick; tin roof; electric lighting; cost \$12,000; plans by G. Lloyd Preacher, Dyer Bldg., Augusta.

Ga., Grovetown.—J. L. Dodge, Augusta, Ga., awarded contract to H. C. Vanormer & Sons, Lexington, S. C., to erect dwelling; two stories and basement; frame; hardwood floors; steam heat; electric lighting from private plant; tin roof; cost \$21,000; plans by G. Lloyd Preacher, Dyer Bldg., Augusta, Ga. (Previously noted under Augusta, Ga.)

Ga., Macon.—Joseph W. Palmer has plans by Curran R. Ellis, Macon, for residence; frame; one story; cost \$3500; contract awarded.

Ga., Macon.—H. Watterman, Jr., has plans by Curran R. Ellis, Macon, for residence in Cherokee Heights; one story; frame; cost \$4500; contract awarded.

Ga., Macon.—Dr. C. H. Perdue has plans by Curran R. Ellis, Macon, for residence in Buford Pl.; two stories; frame; cost \$5000; contract awarded to C. C. Hayes, Macon. (Previously noted.)

S. C., Greenville.—Dr. J. L. Anderson, 621 Buncombe St., awarded contract to J. H. Jones of Greenville to erect residence; two stories; ordinary construction; open fireplace and baseburner; electric lights; cypress shingle roof; cost \$3500; plans by Park A. Dallis, Atlanta, Ga.

La., Shreveport.—Dr. G. W. Robinson awarded contract to Mr. Skoog to erect residence at Robinson Pl. and Fairfield Ave.

Md., Catonsville.—George Heinmueller, 626 Frederick Ave., awarded contract to erect store and dwelling. (See "Stores.")

Md., Baltimore.—Mary Fear awarded contract to H. W. Thomas, 2014 Shingluff Ave., Baltimore, to erect five dwellings at 1919-1927 Clifton Ave.; 14x44 feet; two stories; hot-air heat; cost \$6500; plans by Frederick E. Beall, 213 St. Paul St., Baltimore. (Recently noted.)

Tenn., Memphis.—Carroll Seabrook awarded contract to W. E. Brogdon, Memphis, to erect residence at 27 N. Cleveland St.; cost \$3000.

Va., Norfolk.—J. H. Costenbader awarded contract to R. L. Layman, Norfolk, to erect two-story frame residence; cost \$3800.

Va., Richmond.—Benedictine Sisters awarded contract to Boyle-Robertson Construction Co., 1516 H St. N. W., Washington, D. C., to erect residence and chapel. (See "Churches.")

Va., Richmond.—B. H. Perkins awarded contract to Davis & Archer, Richmond, to erect brick dwelling on Stuart Ave.; cost \$4000.

Va., Richmond.—Mrs. Julia M. Dunn awarded contract to A. D. Sprengle, Richmond, to erect brick dwelling at Hanover and Rosemeath Rd.; cost \$3500.

Va., Richmond.—Phillip Colavita awarded contract to John Amrhein & Bro., Richmond, to erect brick dwelling at 2629 W. Grace St.; cost \$6500.

GOVERNMENT AND STATE

Fla., Lakeland.—Postoffice, etc.—J. L. Skipper awarded contract to Central Construction Co. to erect postoffice, lodge and office building; three stories; 40x50 feet; first story to have tile floor, walls of white-enamelled brick and equipped with postoffice fixtures, etc.; second story for offices; third story for lodgerooms; enameled brick; Carey roofing; plate-glass front; plans by H. Leslie Scott, Bryant Bldg., Lakeland. (Recently noted.)

HOTELS

Mo., Kansas City.—Belmont Building Co., John H. Van Closter, president, awarded contract to George L. Brown & Son, Kansas City, to erect hotel at Linwood Boulevard and Harrison Sts.; six stories; walls to support additional stories; 119x150 feet; fireproof; concrete frame; exterior walls faced with tapestry brick; gypsum block partitions; main dining-room 60x12 feet; 165 bedrooms, 70 baths; cost \$160,000; plans by L. G. Middaugh, Kansas City.

N. C., Greenville.—Proctor Hotel Co. awarded contract at \$41,235 to York & Cobb, Greenville, to erect hotel; four stories; 87x95 feet; ordinary construction; steam heat; electric lights and elevators; tin roof; plans by Hook & Rogers, Charlotte, N. C. (Recently noted.)

Tex., Waxahachie.—Waxahachie Real Estate Building Association awarded contract to Gross Construction Co., Oklahoma City, Okla., to erect hotel; four stories and basement; reinforced concrete; 75 rooms; cost \$100,000; plans by C. D. Hill & Co., Dallas, Tex. (Previously noted.)

Va., Richmond.—William Reuger awarded contract to F. T. Nesbitt & Co., Inc., Woodward Bldg., Washington, D. C., to erect hotel at 9th and Bank Sts.; 10 stories; steel, stone and brick; fireproof; 150 rooms; subcellar 30 feet below sidewalk to contain storage and machinery rooms; first story of stone and terra-cotta; remainder of building of gray brick with terra-cotta trimmings; roof constructed to permit converting same into roof garden; steam heat; electric lighting; slag roof; electric elevators; cost \$300,000. (Recently noted.)

MISCELLANEOUS

Fla., Lakeland.—Postoffice.—J. L. Skipper awarded contract to erect postoffice, lodge and office building. (See "Government and State.")

Ga., Augusta.—Fair.—Georgia-Carolina Fair Association awarded contract to H. C. Morrison to erect fair building; octagon shape; two wings 200 feet long; sides 50 feet long; seating capacity 5000; plans by G. Lloyd Preacher, Augusta. (Previously noted.)

Miss., Meridian.—Fair.—Mississippi-Alabama Fair Association awarded contract to P. V. Carson, Meridian, Miss., to erect 100x180-foot machinery hall; plans by Burt Stuart, Meridian. (Recently noted.)

Tex., Mardin.—Undertaking Establishment. Oltorf Bros. awarded contract to Portel Bros., Marlin, to erect building to be occupied by Denning & Ragsdale for undertaking establishment; one story; brick; 60x30 feet.

W. Va., Beckley.—Hospital.—Dr. Campbell awarded contract to Moore Bros., Cambria, Va., to erect hospital to replace burned structure; brick veneer; interior partitions of metal lath; 40x115 feet; three stories and basement; ordinary construction; cost \$15,000; hot water heating, cost \$1500; electric lighting, cost \$250; sidewalk vault lights, cost \$250; tin roofing; plans by Miller & Mahood.

RAILWAY STATIONS

Tex., Pilot Point.—Texas & Pacific Railroad, B. S. Wathen, chief engineer, Dallas, Tex., awarded contract to George Harris, Denton, Tex., to erect depot; brick and concrete; cost \$8000.

W. Va., Huntington.—Chesapeake & Ohio

Railway Co., F. L. Cabell, chief engineer, Richmond, Va., awarded contract to A. M. Walkup, Richmond, Va., to erect passenger station and division office; three stories; 52x117 feet, with concourse 900 feet long; ordinary construction; steam heat; electric lights; concourse 30x900 feet, roofed, with walks around entire building; slate roof; passenger elevators; plans by Harris & Richlands, Philadelphia, Pa.; cost \$85,000. (Lately noted.)

SCHOOLS

Fla., Gainesville.—State Board of Control awarded contract at \$71,576 to Holladay & Crouse Co., Greensboro, N. C., to erect Penobscot Hall and language hall at University of Florida, and at \$2122 and \$1831, respectively, to Atlanta (Ga.) Steam Heating Co. for heating. (Recently noted.)

Fla., St. Augustine.—State Board of Control awarded contract at \$33,010.30 to Holladay & Crouse Co., Greensboro, N. C., to erect industrial arts building at State Deaf and Blind School; at \$2242 to Atlanta (Ga.) Steam Heating Co. for steam heating plant; plans by W. A. Edwards, Atlanta, Ga. (Recently noted.)

La., New Orleans.—Hugly Academy awarded contract to W. E. Walls, New Orleans, to erect addition to academy; one story; frame and brick; cost \$8000.

Md., Baltimore.—City awarded contract at \$20,667 to Charles L. Stockhausen, National Marine Bank Bldg., Baltimore, to erect addition to No. 13 School at Patterson Park Ave. and McElderry St.; two stories; brick; stone trimmings; terra-cotta roof; 103x56 feet; ordinary construction; steam heat; plans by C. E. Stubbs, Inspector of Buildings, City Hall, Baltimore. (Recently noted.)

Tenn., Arlington.—Shelby County Commissioners, Memphis, Tenn., awarded contract to erect school; six classrooms, auditorium, library and principal's office; fireproof; brick; terra-cotta trimmings; 57x123 feet; will erect near duplicate building at Rosemark; plans by Jones & Furlinger, Memphis, Tenn. (Recently noted.)

Tenn., Chattanooga.—Hamilton County Board of Education awarded contracts as follows for five schools: To W. A. Varner & Son at \$2298, \$2397 and \$2400, respectively, for Mt. Tabor, Roberts Mill and Brown's Chapel schools; to MacJunkin & Son at \$3972 for Hill City school, and to B. F. Brandon at \$12,000 for Orchard Knob school; plans for first four structures by Adams & Alsop, James Bldg., Chattanooga, and for Orchard Knob school by R. H. Hunt, 1225 James Bldg., Chattanooga. (Recently noted.)

Tenn., Hill City.—Hamilton County Board of Education awarded contract at \$3972 to MacJunkin & Son to erect school. (See Tenn., Chattanooga.)

Tenn., Lucy.—Shelby County Commissioners, Memphis, Tenn., awarded contract to erect high school; four rooms, auditorium, library and principal's office; brick and terra-cotta; will erect nearly same style structure at Capleville; plans by Jones & Furlinger, Memphis, Tenn.

Tenn., Madisonville.—Board of Education awarded contract to J. R. Barlason, Madisonville, to erect annex to high school; four recitation-rooms, hall and stairway, with additional entrance to auditorium.

Tenn., Orchard Knob.—Hamilton County Board of Education awarded contract at \$12,000 to B. F. Brandon, Chattanooga, Tenn., to erect school. (See Tenn., Chattanooga.)

Tenn., Houston.—St. Patrick's School awarded contract to Schmitz & Co., Houston, to erect school to replace burned structure; cost \$17,000. (Previously mentioned.)

Va., Kooke.—School Board of Lee County awarded contract to D. W. Wagner of Bristol, Tenn., to erect school; frame; 75x64 feet; four classrooms and hall; cost \$5000; steam heat to cost \$800; electric lighting; crosscut wood shingle roof; plans by D. B. Sayers of Big Stone Gap, Va.

Va., Norfolk.—Tanners Creek District School Board awarded contract at \$11,442 to Seay Bros., Norfolk, to erect school at Larchmont; brick; 29x67 feet; mill construction; slate roof; cost \$11,500; plans by Lee & Diehl of Norfolk, Va. (Lately noted.)

Va., Pennington Gap.—Pennington Gap School District awarded contract to D. W. Wagner of Bristol, Tenn., to erect high school; 72x56 feet; two stories and basement; ordinary brick; steam heating; electric lighting; galvanized shingle roof; plans by George F. Barber & Co., Knoxville, Tenn.; cost \$10,000. (See "Machinery Wanted.")

Va., Portsmouth.—South Norfolk District School Board awarded contract at \$12,880 to

E. C. Smith, Franklin, Va., to erect school at Oakdale; plans by Lee & Diehl, 408 Seaboard Bank Bldg., Norfolk, Va. (Recently noted.)

Va., Stewartsville.—Chamblissburg School District awarded contract at \$4297 to J. W. Feters, Lynchburg, Va., to erect high school; four classrooms; frame.

STORES

Fla., Tampa.—Patrick & McCranie awarded contract to G. A. Miller of Tampa to erect store and apartment building; 32x70 feet; two stories; ordinary construction; electric lighting; cost \$5500; plans by A. L. Shaw. (Recently noted.)

Fla., Orlando.—G. A. Miller, Petteway Bldg., Tampa, Fla., has contract to erect store and dwelling; 90x200 feet; gravel roof; tile floor; electric lights; cost \$55,000; plans by F. J. Kennard, Tampa, Fla.

Ga., Atlanta.—Hugh Inman estate awarded contract to Industrial Engineering Co., Atlanta, to extend Whitehall St. frontage of Davison-Paxon-Stokes Company's store to seven stories; cost about \$65,000.

Ga., Savannah.—Mordecai-Smith Furniture Co. awarded contract to Collins Bros. Company, Savannah, to remodel buildings at 221-223 Congress St.; will install plate-glass front, tile floors, elevators, etc.; will convert two stores into one; cost \$12,000.

Ga., LaGrange.—Callaway's Department Store awarded contract to H. J. Carr & Co., Atlanta, Ga., to erect department store; three stories; cost \$25,000.

Ky., Middlesboro.—Mrs. T. W. Berkley, Lexington, Ky., awarded contract to Miller, Garrett & Sharp to erect business building; two stories; pressed-brick front; 25x80 feet; lower floor for stores; upper floor for apartments.

Md., Catonsville.—George Heinmueller, 626 Frederick Ave., awarded contract to William Espey, 76 Butcher Lane, Baltimore, Md., to erect store and dwelling at 634 Frederick Ave.; brick; 20x51 feet; three stories; plans by Walter M. Gieske, 60 Gunther Bldg., Baltimore, Md. (Previously noted.)

N. C., Durham.—S. H. Kress & Co., 306 Broadway, New York, awarded contract to N. Underwood, Durham, to remodel Summerfield Bldg. for store; contract for heating and elevator awarded; cost \$10,000; plans by Seymour Burrell, 350 Broadway, New York.

N. C., Rocky Mount.—M. O. Blount awarded contract to D. J. Rose, Rocky Mount, to erect proposed store; 40x110 feet; brick; two stories; ordinary construction; plans by John C. Stout, Rocky Mount.

S. C., Sumter.—McCallum Realty Co. awarded contract to Carr Construction Co., Sumter, to erect store; two stories; brick; limestone front; cost \$6000.

Tenn., Knoxville.—S. H. George & Sons awarded contract to J. M. Dunn & Son, Knoxville, to remodel store building at 321 S. Gay St.; cost \$8300; plans by Baumann Bros., Knoxville.

Tenn., Houston.—Stowers Furniture Co. awarded contract to Pearson & Co., Houston, to erect store building at Walker Ave. and Faunin St.; 10 stories; 105x116 feet; reinforced concrete; sprinkler system; cost about \$100,000; plans by Carl Suter, San Antonio, Tex. (Recently noted.)

Va., Richmond.—S. E. Meredith, 3016 Monument Ave., awarded contract to erect store; 60x120 feet; mill construction; grate heating; lighting; tin roof; cost \$6000; plans by I. T. Skinner Miller Manufacturing Co. (Lately noted.)

WAREHOUSES

Fla., Tampa.—C. B. Witt awarded contract to McGucken & Hyer to erect wholesale grocery warehouse; 100x150 feet; fireproof; cost \$25,000.

Ky., Lexington.—Fayette Loose Leaf Tobacco Warehouse Co. changed name to Fayette Tobacco Warehouse Co. and increased capital stock from \$30,000 to \$50,000; awarded contract to Robert Latham, Lexington, to erect addition to plant; steel, concrete and brick; one story; 418x150 feet; cost \$55,000; will provide accommodations for 150 horses.

Ky., Maysville.—Central Loose Leaf Tobacco Warehouse Co. awarded contract to Isaac Lane, Maysville, to erect warehouse; 162x282 feet; frame; sheet-iron walls.

Md., Baltimore.—C. C. Stieff & Co., 17 McLane Pl., awarded contract to Henry Pearson & Sons, 1000 Olive St., Baltimore, to erect additional story to warehouse at 311 W. German St.; 36x150 feet; brick; cost \$3000.

Md., Baltimore.—L. S. Collison, 1707 Thames St., awarded contract to H. S.

Shenley, 2310 Orleans St., Baltimore, to erect warehouse and storage building at 1014 Aliceanna St.; two stories; pressed brick; stone trimmings; slag roof; 24x50 feet; electric lights; cement sidewalks; cost \$2500; plans by O. C. Wright, Munsey Bldg. (See "Machinery Wanted.")

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Mobile.—L. C. Fry, Henry Hall, Le Baron Lyons, J. H. Wilson and C. H. Brown have been appointed by the Chamber of Commerce and Business League as a committee on the subject of a belt line railroad for Mobile.

Ala., Mountain Creek.—Chilton County Mining & Manufacturing Co., says a report, has completed a narrow-gauge railroad three miles long from Mountain Creek to iron-ore mines.

Ala., Montgomery.—Andrew Perry, contractor, Montgomery, is reported to have begun clearing right of way for the Montgomery & Chattanooga Railroad between Central and Equality, Ala. M. C. Stokes and others are interested, and J. M. Garrett is chief engineer.

Ala., Robertsdale.—E. B. Gaston and others of Fairhope are reported working on a plan for the construction of a line to be known as the People's Railroad.

Ala., Vinegar Bend.—Alabama & Mississippi Railroad Co. is reported to have resumed construction upon extension to Moss Point, Miss., only eight miles of grade remaining to be done. N. E. Turner, Vinegar Bend, Ala., is president.

Ark., Hardy.—S. P. Turner of Hardy is reported interested in the Mexican Gulf & Manitoba Railroad Co., which proposes to build a line from some point in Manitoba, Canada, to the Gulf of Mexico. John M. Wiley, chief engineer, is quoted saying that the line will enter Arkansas from the north at Hardy and proceed via Des Arc and De Val's Bluff, Ark., to Baton Rouge, La. Engineering parties will take the field at Hardy and also at Alton, Mo.

Ark., Helena.—The Missouri & North Arkansas Railroad, it is reported, will soon begin construction of a terminal at Helena. George L. Sands, Jesse McDonald and W. S. Holt, St. Louis, are receivers for the road.

D. C., Washington.—Congressman Thomas Parran of Maryland has introduced a bill in the House contemplating construction of a Government railroad from the Washington Navy-yard to Indian Head, Md., 25 miles, where the proving grounds are situated. It calls for an appropriation of \$10,000 for survey, etc.

Fla., Caryville.—Henderson-Walt Lumber Co., George O. Walt, vice-president and general manager, is reported surveying for a railroad from Caryville to develop timber lands. L. W. Hubbard is chief engineer.

Fla., Tampa.—Tampa Northern Railroad, 60 miles long, from Tampa to Brooksville, Fla., is reported sold to the Seaboard Air Line, which will, it is understood, continue the work of extending the road to Dunnellon, Fla., and Thomasville, Ga., altogether about 250 miles from Tampa. M. F. Amoroso, Tampa, Fla., is president and general manager of the Tampa Northern. A later report says that Charles R. Capps, vice-president of the Seaboard, has been elected president of the Tampa Northern, with R. L. Nutt secretary and treasurer; D. C. Porteous, assistant secretary; W. T. Roby, comptroller, and Peter O. Knight of Tampa, general counsel.

Ga., Augusta.—A special dispatch to the Manufacturers Record says that Jacob Phinizy and associates have asked the City Council of Augusta to appropriate a bonus of \$50,000 to induce the Irwin Railroad Co. to build an extension to Athens, Ga., via Augusta. Referred to finance committee. Equal amount asked to aid proposed barge line on Savannah River. George M. Brinson, Springfield, Ga., is president of the road.

Ga., Valdosta.—A letter quotes Frank Roberts of Valdosta, president, as saying that construction will begin by September 15 on the extension of the Valdosta, Moultrie & Western Railway from Moultrie, Ga., to Montgomery, Ala., and its name will be changed to Valdosta, Fort Gaines & Montgomery Railroad.

Ga., Waycross.—Waycross Southern Railroad Co., says a report, has decided to increase its capital stock by \$100,000 July 17 and will, it is rumored, extend to the western coast of Florida. J. W. Oakford, Scranton, Pa., is president, and J. M. Hopkins, Waycross, Ga., is general superintendent.

Ky., Falmouth.—A report from Carlisle,

Va., Richmond.—Phil G. Kelly awarded contract to Fulton Brick Works to erect warehouse on 18th St.; cost \$7000.

Va., Richmond.—G. G. Worsham and C. A. Zinke awarded contract to S. W. Fleet, Richmond, to erect warehouse on Governor St.; cost \$7000.

Ky., says that plat showing route of Cincinnati, Licking Valley & Virginia Railway through Nicholas county has been filed there. It enters the county at Blue Lick Springs and crosses there to the south side of Licking River; thence to the C. F. Letcher farm, there again crosses the river and the Louisville & Nashville Railroad near Pleasant Valley, and goes along the river to Parks Ferry and into Fleming county. Road will run from Newport, Ky., to Cumberland Gap, J. B. Walker of Huntsville, Ala., and Falmouth, Ky., is president; T. J. Stuart of Winchester, Ky., is vice-president, and S. V. Buskirk of Cincinnati, O., secretary and treasurer.

Ky., Frankfort.—Shelbyville & Frankfort Realty Co., which is to obtain right of way for electric railway between the two cities named, has organized thus: E. H. Taylor, Jr., president; R. D. Armstrong, vice-president; Kenner Taylor, treasurer; Eli H. Brown, secretary. Others interested also as directors are Charles E. Hoge, Swigert Taylor, Eli H. Brown, Jr., W. M. Nash, W. B. Middleton and J. W. Gudgel. A committee was appointed to confer with the Louisville Railway Co. about extending from Shelbyville to Frankfort.

Ky., Owensboro.—A. H. Kennedy, Rockport, Ind., president of the Owensboro & Rockport Bridge & Terminal Co., says that it is hoped to begin construction in September. Cantilever bridge over Ohio River and 75 miles of railroad are estimated to cost \$4,500,000. T. H. Hazelrigg, Owensboro, Ky., is engineer. Other officers are E. T. Franks, first vice-president; Dr. D. M. Griffith, second vice-president; Gray Haynes, treasurer, and George H. Cox, secretary, all of Owensboro, Ky.

Ky., Paducah.—The Cleveland, Cincinnati, Chicago & St. Louis Railway will, it is reported, begin construction about September 1 on extension into Paducah. George P. Smith of Cincinnati is chief engineer.

Ky., Pikeville.—Knox Creek Railway Co. of Pikeville has been chartered; capital \$50,000; incorporators, W. M. Ritter, Jacob Hamill, C. K. Weakley and J. A. Devine. Mr. Ritter's address is Columbus, Ohio; he is president of the Big Sandy & Cumberland Railroad, O'Keefe, W. Va., and the Lluville River Railway, Saginaw, N. C. The new line is perhaps a lumber railroad.

Miss., Columbus.—Memphis, Columbus & Gulf Railroad Co. has been voted \$30,000 of bonds at Aberdeen, Miss., and it is said construction will soon begin. Practically all grading is completed between Okolona and Aberdeen. G. T. Heard and others are interested.

Miss., Gulfport.—E. McL. Long, 172 Fulton St., New York, is chief engineer for the proposed Gulfport & Western Railroad, of which W. H. Hardy of Gulfport is president. His name was erroneously reported last week as Lang. The line to be built is from Gulfport, Miss., to Covington, La., 62 miles.

Miss., Meridian.—S. A. Neville, vice-president Meridian & Memphis Railway Co., says that subcontracts have been let thus: J. A. Perdue & Co., for grading from Meridian to Union, Miss., about 40 miles; Newell & Wright of Meridian, for trestling and bridges, also tracklaying. Work is now proceeding all along the line.

Mo., Farmington.—Reported that the Mississippi River & Bonne Terre Railroad Co. has bought the St. Francis County Railroad, and improvements may be made. R. R. S. Parsons will be president and F. H. Dearing secretary, both of Bonne Terre, Mo. M. P. Cayce and W. R. Taylor of Farmington, Mo., will continue on the board, besides E. A. Rozier of the same place.

Mo., Kansas City.—J. R. Harrington of Des Moines, Iowa, is reported elected general manager of the Kansas City, Clay County & St. Joseph Electric Railway Co., and will be in charge of its construction work now under way. The Wyandotte Construction Co., Grand Avenue Temple, Kansas City, Mo., is the contractor.

Mo., Kansas City.—It is announced in New York that the Kansas City, Mexico & Orient Railway will shortly issue and sell \$1,500,000 more of receivers' certificates to continue construction from Fort Stockton to Alpine, Tex. Edward Dickinson, J. O. Davidson and

M. L. Turner are the receivers, at Kansas City, Mo.

Mo., St. Louis.—An official of the St. Louis, Iron Mountain & Southern Railroad (Missouri Pacific system) is quoted saying that second track between St. Louis and Texarkana will be constructed only as required. At present it is being built between Bald Knob, Ark., and McAlmond, nine miles. An extension to New Orleans is not contemplated now. E. F. Mitchell, St. Louis, is chief engineer.

N. C., Burlington.—Piedmont & Eastern Railway Co. of Burlington, N. C., is chartered to build and operate street and interurban railways from Winston-Salem via Greensboro, Burlington, Graham and Chapel Hill to Durham, N. C., or to other points within 50 miles of Burlington. It is understood that the 10-mile line between Burlington, Graham and Haw River will be absorbed; capital \$125,000; incorporators, J. W. Murray, John M. Cook, J. H. Harden and A. L. Davis of Burlington, Charles A. Scott of Graham, N. C., and J. R. Paschall, James Mullen, Warner Moore and C. Bolce of Richmond, Va.

N. C., Greensboro.—Proposed Greensboro, Roxboro & Norfolk Railway Co. has organized as the Greensboro Northern & Atlantic Railway Co., and will immediately undertake construction of a line from Greensboro along Haw River through Guilford, Alamance, Chatham and Lee counties to a connection with the Seaboard Air Line and the Norfolk Southern railroads. It then expects to extend to Roxboro and Oxford, N. C., and in the other direction to Danville, Va. Directors are T. W. Troy of Amherst, Va., president; J. W. Fry of Greensboro, N. C., vice-president and treasurer; R. C. Hood, A. L. Brooks, C. D. Benbow, A. B. Kimball, A. W. McAllister, E. J. Justice, Garland Daniel and John J. Phoenix of Greensboro. Mr. Troy, who has come into the enterprise, promoted the Lynchburg, Danville & Carolina Railway Co. to build a line from Virginia into North Carolina, and that plan is included in the new company's aims.

N. C., Thomasville.—Carolina & Yadkin River Railroad Co. is reported to have amended charter to increase capital from \$1,000,000 to \$4,000,000. Bird S. Coler of New York is president and T. H. Hole, Jr., secretary. Extensions and improvements are proposed.

N. C., Waynesville.—O. H. Viall, president of a new lumber company, will, it is reported, begin immediate construction of a railroad from Waynesville for a distance of 14 miles.

Okla., Cheyenne.—A. D. Cox, J. W. Cooper, E. L. Mitchell, W. A. Beatty and R. D. Alexander are reported organizing a railroad company to build a line six miles long from Cheyenne to Strong City, on the Clinton & Oklahoma Western Railway.

Okla., Billings.—J. B. Berry, chief engineer of the Rock Island System, says he knows nothing about a plan to build a line from Billings to Bliss, Okla. This denies a recent press report that the company was considering such a route.

Okla., Billings.—Chicago, Rock Island & Pacific Railway is reported considering proposition that it build a line from Billings to Bliss, Okla. J. B. Berry, Chicago, Ill., is chief engineer.

Okla., Butler.—After completing its line from Butler to Strong City, 30 miles, it is said that the Clinton, Oklahoma & Western Railroad Co. will continue construction to Canadian, Tex., on the Fort Worth & Denver City Railway. J. W. Maney of Oklahoma City is president, and T. J. Nance of Clinton, Okla., is vice-president and general manager.

Okla., El Reno.—The Fort Smith & Western Railway, says a report, will soon begin construction of extensions thus: El Paso to Elk City, Okla., 140 miles; Clinton to Alva, Okla., 130 miles; also a line into Oklahoma City. W. M. Bushnell, Fort Smith, Ark., is general manager.

Okla., Tecumseh.—J. W. Saxon of Tecumseh, president of the Rapid Transit Interurban Railway Co., is reported to have financed in Philadelphia a line from Tecumseh to Oklahoma City, about 40 miles, and another from Tecumseh via Archer to Sulphur, Okla., about 75 miles. After these are built it is contemplated to build via Chandler to Guthrie, Okla., about 125 miles. Work on the first line is to start this summer.

S. C., Greenville.—Greenville & Knoxville Railway is reported surveying from River Falls through the mountains toward Knoxville, Tenn., for its long-contemplated extension. Rights of way are also being obtained. J. R. Cothran is chief engineer at Greenville, S. C.

S. C., Greenville.—J. R. Cothran, chief en-

gineer, says that the proposed extension of the Greenville & Knoxville Railroad is from River Falls, S. C., via Brevard, N. C., to Knoxville, Tenn., 176 miles, through very mountainous country. Not yet determined when bids for construction will be received. W. H. Patterson is president and John S. Owens vice-president and treasurer, and Asa G. Candler, Jr., secretary.

Tenn., Brick Church (Route 1 via Pulaski). O. A. Gibson has a contract for 400,000 yards of earth and rock work on the new line of the Louisville & Nashville Railroad, 13 miles from Pulaski, Tenn.

Tenn., Morristown.—A correspondent writes that the Morristown Interurban Railway Co. has been chartered to build lines from Morristown to Rogersville and Kingsport, Tenn., about 50 miles; also from Morristown to Tate Spring, Tazewell and Cumberland Gap, Tenn., 35 miles; Morristown to Warrensburg, 15 miles; Morristown to Newport, 20 miles; Morristown to Jefferson City, 15 miles, and Morristown to Sevierville via Dandridge, Tenn., 30 miles; incorporators, J. F. Goodson, E. R. Taylor, R. M. Rogers, J. N. Fisher and W. B. Whitaker of Morristown. Power will be furnished by the Morristown Power & Development Co., which has also just been chartered.

Tex., Broadus.—The Knox Lumber Co. is reported to have completed several miles of its railroad from Broadus eastward, and which will be 42 miles long from Broadus to the Sabine River. It will be called Lufkin, Hemphill & Gulf Railway, and will, it is further reported, be eventually connected with the Shreveport, Alexandria & Southwestern Railway lines. Hiram Knox of Broadus, Tex., is president, and among the directors are W. M. Cady of McNary, La., and Robert Stack of Woodworth, La.

Tex., El Paso.—Concerning the report that the Stone & Webster Engineering Corporation of Boston would build an electric railway from El Paso to Ysleta, a letter from headquarters says that nothing has been decided in the premises. Survey is being made, and nothing will be done until report is received.

Tex., Fort Worth.—Rail laying is reported complete between Fort Worth and Cleburne, Tex., 32½ miles, on the Fort Worth and Cleburne Interurban. Ballasting, bonding of rails and erection of overhead work are yet to be done, and line is to be operated about September 1.

Tex., Jacksboro.—The Texas Building Co. of Fort Worth, contractor for the extension of the Gulf, Texas & Western Railway from Jacksboro to Salesville, is assembling engineers and grading forces to begin construction. It is expected to be completed by autumn.

Tex., San Antonio.—Charter is reported filed for the Rockport & Harbor Island Dock & Terminal Railway Co. to build a terminal railroad 12 miles long between Rockport and Harbor Island, Tex., and other terminal facilities for the San Antonio, Rockport & Mexican Railway, now under construction. A. L. Matlock of San Antonio filed charter. Incorporators include E. Cowperthwaite of London, Eng.; S. A. Hopkins of Boston; Charles G. Johnson of Rockport, Tex.; R. R. Russell, Nat. M. Washer, R. L. Ball, H. E. Hildebrand, W. A. Lowe, J. H. Halle and J. Frank Davis of San Antonio, Tex. Excepting Messrs. Halle and Davis, the directors are as above with the addition of O. R. Mounsey of London. Capital stock, \$12,000.

Tex., San Antonio.—A cable from London says, it is announced, that the English syndicate building the San Antonio, Rockport & Mexican Railway has voted funds to build a line to the Rio Grande as rapidly as possible, this being in addition to its line to the Gulf coast. Line will run to Laredo. E. Cowperthwaite is president. S. A. Hopkins of San Antonio, Tex., is first vice-president.

Va., Abingdon.—Further particulars as to route of proposed extension of the Virginia-Carolina Railway say it will follow Greene Cove Creek in Washington and Grayson counties, Virginia, and Horse Creek, in Ashe county, North Carolina. Then it will proceed up North Fork of New River and along Buffalo Creek via Jefferson to Elk Cross-Roads (Todd), N. C., whence it will finally go to Boone, N. C. P. W. Early, Abingdon, Va., is chief engineer.

Va., Lynchburg.—An officer of the Norfolk & Western Railway is quoted as denying recent press report that the company would build second track near Farmville, Va.

W. Va., Morgantown.—Reported that survey from Morgantown to Wheeling is completed for an electric railway, and it will be built by the William Morris Imbrie Company of New York, which is said to have closed a deal from the Union Utilities Street Railway

of Morgantown and the Wheeling & Elm Grove Railway of Wheeling.

STREET RAILWAYS

La., Shreveport.—Shreveport Traction Co. has been voted franchise for a line to Allendale and another line to City Park.

Tex., Cleburne.—W. A. McCutcheon of Denver, Col., is reported to have sold control of the Cleburne Street Railway Co. to G. W. Hutchinson of Kermit, Tex., and the latter is quoted saying that important improvements will be made.

Fla., St. Augustine.—St. John's Electric Co. is reported planning improvements that will cost \$50,000, including construction of extension to New Augustine.

Miss., Vicksburg.—Vicksburg Railway & Lighting Co. is reported to have been acquired by I. C. Elston, Jr., and W. B. Walker of Chicago, who, it is said, contemplate

extensive improvements. W. B. Moorman, Vicksburg, Miss., is manager.

N. C., Winston-Salem.—Reported that the Fries Manufacturing & Power Co. will change the route of its line to Nissen Park and Waughtown, so that it will run through a tract of land purchased by H. E. Fries and others to be developed as a residential suburb.

Va., Richmond.—John C. Hagan of the Richmond & Henrico Railway Co. is quoted saying that it will spend \$1,250,000 for the enlargement and equipment of its property as soon as the franchise ordinance becomes law.

W. Va., Morgantown.—Morgantown & Star City Railway Co. chartered to build a line from Front and Pleasant Sts. in Morgantown to the B. & O. Railroad station at Star City, about three miles; capital \$10,000; incorporators, R. B. Reid, W. K. Hoffman, D. C. Hoffman and G. B. Hartley.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

Air Compressor.—See "Vulcanizing Machinery."

Blackboards.—D. W. Wagner of Bristol, Tenn., wants prices on slate blackboards for school.

Boiler.—See "Vulcanizing Machinery."

Boilers.—Grafton Bailey, 927 Massachusetts Ave. N. W., Washington, D. C., wants prices on boilers for hot-water heating plant.

Brick Plant.—Robt. Blackwood, Venable, N. C., wants prices on new or second-hand brick plant. State capacity and model, and whether steam or gas power.

Bridge (Approach) Construction.—Sealed bids received by Board of Public Works, 28 First National Bank Bldg., Tampa, Fla., until 2 P. M. August 6 for constructing reinforced concrete retaining walls and bulkhead at last approach to Fortune-street bridge; plans and specifications obtainable from City Engineer; certified check \$500; D. B. McKay, chairman; Allen Thomas, clerk.

Bridge Construction.—Police Jury, Madison parish, Louisiana, will receive bids September 4 for construction of following bridges: Over Willow Bayou, on road leading north from Tallulah, 80-foot span; over Panther Lake, on road leading north from Waverly, 64-foot span; over Sut Bayous, south of Waverly, 120-foot span; over Little Fork, south of Waverly; bridges to have concrete abutments and capacity for weight of 20-ton traction engine; roadway 12 feet; engineers to furnish own plans, one to be selected by board; bond or certified check required; bids to be directed to W. H. Harvey, secretary, Tallulah, La.

Bridge Construction.—Board of Supervisors, R. W. Draper, clerk, Batesville, Miss., receives bids August 5 at courthouse for building steel bridge across Hotopka Creek, and a concrete bridge over Jones' ditch; plans and specifications on file at office of Chancery Clerk, Batesville.

Building Material.—Grafton Bailey, 927 Massachusetts Ave. N. W., Washington, D. C., wants prices on building materials.

Building Materials.—B. H. Stephens, Wilmington, N. C., wants prices on terracotta, granite, metal lath, hard plaster, columns, store fronts, metal windows, waterproofing, grilles, water heaters, lockers, marble and mosaics, metal ceilings, parquet flooring, plastic ornaments, ventilators and tanks for hotel at Lumberton, N. C.

Building Supplies.—Burchfield Bros., Tuscaloosa, Ala., will receive bids until July 12 for following supplies: Lime, cement, brick, glass, cut stone, marble, doors, windows, paint, steel, roofing, sand, gravel, etc.; delivered at 4th St. and Greensboro Ave.; plans at office of E. J. Osterling & Son, architect, Alston Bldg., Tuscaloosa.

Cars.—Pennsylvania Equipment Co., West End Trust Bldg., Philadelphia, Pa., wants to purchase some 40-foot 80,000-pound capacity flat cars.

Cars.—Pennsylvania Equipment Co., West End Trust Bldg., Philadelphia, Pa., wants prices on two second-hand 50-ton steel under-frame wooden drop-bottom coal cars.

Concrete Work.—Burchfield Bros., Tus-

caloosa, Ala., want bids on concrete work. (See "Building Supplies.")

Coal-handling Plant.—Tampa Coal Co., Judy Bldg., Tampa, Fla., is ready for propositions on coal-discharging plant of 400 to 600 tons capacity per 10 hours.

Concrete Molds.—E. L. Higdon Company, Sloss Ave. and 6th St., Woodlawn, Birmingham, Ala., wants catalogues and prices on improved molds for making concrete.

Cutting and Welding Machine.—Pennsylvania Equipment Co., West End Trust Bldg., Philadelphia, Pa., wants prices on second-hand acetylene gas cutting and welding machine; describe fully.

Cornmeal Mill.—Newport Produce Co., Newport, Tenn., wants mill for manufacturing bolted cornmeal; 100 to 200 bushels capacity per 10 hours.

Cotton Machinery.—W. Turner Pound, Gainesville, Fla., wants data on manufacturing cotton rope and belting, such as cost of machinery, cost of production, approximate profit, etc.

Cornices.—Burchfield Bros., Tuscaloosa, Ala., want bids on cornices. (See "Building Supplies.")

Cresosoting Machinery.—Reid W. Bryan, 144 G. Queen St., Charleston, S. C., wants names of manufacturers of cresosoting machinery, such as tanks, pumps, treating cylinders, etc.

Dredge Bucket.—Pennsylvania Equipment Co., West End Trust Building, Broad and South Penn Square, Philadelphia, Pa., wants prices on (Haywood or Williams preferred) 1½-yard flat clamshell bucket.

Dredging Machinery.—Brett Engineering & Contracting Co., Wilson, N. C., wants 1-yard or 1½-yard dipper dredge built on portable steel hull; also 1-yard excavator to straddle small ditches (dipper type excavator only considered).

Electric-Light Plant.—See "Waterworks, Electric-Light Plant and Sewers."

Electric Power.—Burchfield Bros., Tuscaloosa, Ala., want bids on electric power. (See "Building Supplies.")

Electric Lighting, etc.—John R. Reid, chairman Town Trustees, Taylorsville, Ky., receives bids between 2 and 3 P. M. July 20 for purchase and sale of franchise to operate and maintain electric lighting, heating and power plant.

Electrical Equipment.—Grafton Bailey, 927 Massachusetts Ave. N. W., Washington, D. C., wants prices on electrical equipment for \$10,000 apartment-house.

Electrical Machinery.—H. Reeves, Greenville, Tenn., wants 10-kilowatt 3-phase 60-cycle 240-volt alternating generator, with exciter; 10-kilowatt 110-volt direct-current generator; instruments; switchboards and switches; also two 20-horse-power vertical automatic engines; immediate delivery.

Electrical Machinery.—See "Waterworks and Electric System."

Electrical Machinery.—See "Laundry Machinery."

Electrical Machinery.—Bureau of Supplies and Accounts, Washington, D. C.,

opens bids August 6 for induction motor; send for schedule No. 4705.

Electrical Machinery.—Hepler Engineering Co., 1520 Real Estate Trust Bldg., Philadelphia, Pa., wants electro-magnet, one or two tons capacity, to handle pig-iron with locomotive crane; second-hand preferred.

Electrical Machinery.—See "Water-works, etc."

Electrical Machinery.—See "Wood-working Machinery."

Electrical Machinery, etc.—W. W. Worley, Voughtsville, Tenn., wants prices on water-wheel (50 horse-power under head), 40-kilowatt generator, switchboard, 10 miles No. 6 bare copper wire, lightning arresters, transformers, etc.

Electrical Machinery.—J. B. Ashton, Columbia, Tenn., wants prices on 200-kilowatt generator.

Electric Underground System.—Proposals, endorsed "Proposals for underground distribution system," received at Bureau of Yards and Docks, Navy Department, Washington, until 11 A. M. August 3, then opened, for installing complete underground distribution system for electric light, power and telephones at Naval Academy, Annapolis, Md. Plans and specifications can be obtained on application to bureau or to superintendent of Naval Academy. Wm. M. Smith, Acting Chief of Bureau.

Elevators.—B. H. Stephens, Wilmington, N. C., wants prices on freight elevator and dumbwaiter for hotel at Lumberton, N. C.

Embossing Machinery.—W. T. Dabney, business manager, Chamber of Commerce, 801 Mutual Bldg., Richmond, Va., wants (for customer) addresses of manufacturers of machine to emboss ribbon in gold and silver leaf.

Engine.—See "Ginning Machinery."

Engines.—H. Reaves, Greenville, Tenn., wants two 20-horse-power vertical automatic engines. (See "Electrical Machinery.")

"Flint Mouthpiece."—O. H. Parker & Co., Anniston, Ala., want address of manufacturer of glass telephone mouthpiece marked "Flint mouthpiece. Pat. applied for."

Fruit Jar.—W. C. Smith, Jefferson, Ga., wants addresses of manufacturers of "Mellville atmospheric fruit jar made under Whitall's patent of June 18, 1861."

Gas Engines.—A. Fernandez Montilla, Merida, Yucatan, Mexico, wants information, etc., on some kind of motive power to burn natural gas or oil in place of gasoline or alcohol; view to agency.

Ginning Machinery.—Farmers' Warehouse & Fertilizer Co., Reynolds, Ga., want lowest prices on complete system four-stand 70-saw outfit, 75-horse-power automatic boiler and engine, belting, shafting, etc.

Grinding Machinery.—Prince Company, South Davis St., Greensboro, N. C., wants information and prices on machinery to grind sawdust and shavings.

Heating Plant.—Central State Hospital, Petersburg, Va. Bids received until noon July 17 for furnishing material and making alterations, improvements and extensions in heating plant; plans and specifications may be seen at hospital or furnished on application; W. F. Drewry, superintendent.

Heating Plant.—B. H. Stephens, Wilmington, N. C., wants prices on steam-heating plant for hotel at Lumberton, N. C.

Hollow Tile.—Southern Building Material Co., Arcade Bldg., Norfolk, Va., wants addresses of manufacturers of hollow tile; especially hollow tile similar to "Nateco."

Ice Machinery.—S. A. Westenhaver, Martinsburg, W. Va., wants catalogues and prices on ice machinery.

Irrigating Machinery.—A. Fernandez Montilla, Merida, Yucatan, Mexico, wants information, etc., on small irrigating apparatus; view to agency.

Laundry Machinery.—D. A. Dickinson, 701 Culpeper St., Quitman, Ga., wants addresses of manufacturers of or dealers in new or second-hand laundry machinery, including dynamos and electric irons.

Lime.—Rappahannock Valley Farms Corporation, Lee J. Graves, president, Fredericksburg, Va., will want about 200 tons lime in the fall.

Levee Construction.—Mississippi River Commission, first and second levee districts, United States Engineer office, Custom-house, Memphis, Tenn., receives bids until 11 A. M. July 20 to construct 535,000 cubic yards earthwork in Upper and Lower St. Francis levee districts. Information on application. Clarke S. Smith, Major, Engineers.

Levee Construction.—Red Fork Levee Board, Memphis, Tenn., receives bids until

10 A. M. July 20 to construct 125,000 cubic yards levee enlargement work; information on application; G. T. Blackwood, president; J. E. Peoples, engineer.

Loading and Unloading Machinery.—See "Coal-handling Plant."

Logging Equipment.—Cumberland Lumber Co., Sparta, Tenn., wants to buy or lease steam log skidder to handle large timber up steep hills from deep gulch.

Lumber.—H. Jeff Davis, Waynesboro, Ga., wants to purchase mahogany and white pine, also mahogany (sawed and cut) veneering.

Machinery, etc.—Nikolai W. Nissen, 2 Linie, No. 33, St. Petersburg, Russia, wants catalogues and prices, with view to agency, on general machinery; also technical novelties.

Mechanical Equipment.—Treasury Department, office of supervising architect, Washington, D. C. Proposals received until 3 P. M. July 26, and then opened, for repairs to mechanical equipment of United States Treasury, Winder and Butler Buildings, Washington, D. C., in accordance with specification, copies of which may be had at this office at discretion of supervising architect; James A. Wetmore, acting supervising architect.

Office Fixtures, etc.—W. G. Hankins, Kissimmee, Fla., wants to correspond with manufacturers of office fixtures and supplies with view to representation.

Paving.—City of Mt. Sterling, Ky., will let contract at City Council Chamber at 7:45 P. M. July 22 for construction of 4700 square yards brick paving; also curb and gutter; W. A. Samuels, Mayor.

Paving.—Sealed proposals received by Council, Louisa, Ky., until 12 noon July 18 for about 23,000 linear feet combined concrete curb and gutter; bids to be addressed to C. L. Miller, chairman street improvement committee. (See "Sewer Construction.")

Paving.—City of Corpus Christi, Tex., Clark Pease, Mayor, will open bids about August 10 for paving about 150,000 square yards; Arthur Philbrick, engineer in charge.

Paving.—City of San Angelo, Tex., asks bids (to be opened July 15) on paving 23,000 square yards with cross-sloped pine blocks; J. J. Goodfellow, City Engineer.

Paving.—Mayor and Board of Aldermen, Greenwood, Miss., receive bids until noon August 6 (new date) for furnishing materials and completing 25,182 square yards street paving; vitrified brick, bitulithic or cross-sloped wood blocks; work includes 10,500 linear feet concrete curb gutter, 2000 linear feet granite header and 2000 cubic yards excavation; plans and specifications obtainable from R. H. Hicks, clerk, and J. S. Allen, City Engineer.

Paving.—Board of Control, Norfolk, Va., receives bids until 12:30 P. M. July 18 to regulate and pave 10th St. from Granby St. to Llewellyn Ave., Celley Ave. from Westover to Armistead Ave., 13th, 14th and 15th Sts. from Williams to Colonial Ave., and separately Tunstall Ave. from Landing St. to Gibbs Ave.; instructions to bidders, specifications and bidding blanks can be had on applying to City Engineer; approximate schedule of work is shown in blank form of proposal attached to specifications, which may be obtained from City Engineer, W. T. Brooke.

Paving.—Sealed proposals received 3 P. M. July 15 by Board of Commissioners, H. K. Cochran, chairman, Street Improvement District No. 26, Little Rock, Ark., for grading, draining, curbing and paving with wood block, asphalt, brick, bitulithic or other selected materials; plans at office of district engineers, Ford & MacCrea; \$500 certified check; C. E. Smith, secretary, to be addressed.

Paving.—Murphy Township Highway Commission, W. H. Woodbury, president, Murphy, N. C., receives bids until 2 P. M. July 15 (formerly-noted bids rejected) for constructing 22,000 square yards of bituminous street paving; \$500 deposit required; further information furnished by G. W. Scott, engineer, Courthouse Bldg.

Paving, etc.—Sealed proposals received at office of undersigned, Johnson City, Tenn., until 7 P. M. July 18 for constructing street paving with brick asphalt, bitulithic, wood block, granitoid, asphaltic concrete, concrete or tarvia for improvements districts Nos. 11, 12 and 13, according to plans and specifications in office of City Engineer. City reserves right to accept bids as a whole or for any of following items. Approximate quantities: District No. 11, Buffalo St.—500 yards street curb paving; 6440 yards paving, including grading; 2640 linear feet curb and gutter; 1800 linear feet 6-inch sewer connections; 715 linear feet 8-inch vitrified sewer;

2 manholes; 730 linear feet 24-inch vitrified sewer; 370 linear feet 18-inch vitrified sewer; 7 catch-basins; 150 linear feet 12-inch vitrified sewer. District No. 12, East Walnut St.—2300 yards paving, including grading; 1900 linear feet curb and gutter. District No. 13, West Walnut St.—1500 yards paving street-car track; 5530 yards paving, including grading; 3000 linear feet curb and gutter; 400 linear feet 6-inch sewer connections; 1926 linear feet 8-inch vitrified sewer; 6 manholes; certified check equal to 10 per cent. of amount of each bid; bids to be opened at regular meeting of City Council, 7 P. M. August 1; Wm. R. Ponder, Recorder; P. F. McDonald, City Commissioner.

Paving.—A. N. Sloan, Commissioner Department Streets and Sewers, Municipal Bldg., Chattanooga, Tenn., receives bids until 10:30 A. M. July 12 to improve East End Ave. from McCallie Ave. to 11th St., Paving District No. 156; specifications and proposal forms furnished on application to clerk of department; certified check \$250.

Paving.—City of Cotulla, Tex., invites bids on construction of 4000 square feet cement sidewalks; for specifications address T. H. Keck.

Paving.—Sealed bids received until 6 P. M. July 25 at office of Amick & Haynes, City Engineers, Pikeville, Ky., for about 15,000 square yards brick pavement on concrete base; bids must be submitted on blanks furnished by engineers, and plans and specifications may be examined at their office; certified check for \$1000.

Paving.—Bids received until 8 P. M. July 19 (extended date), then opened, at office of Mayor, Athens, Ala., for grading, furnishing material and constructing 9000 square yards cement sidewalk, 725 square yards vitrified brick crosswalk and 650 square yards crushed limestone screening sidewalk; certified check \$300; Lifford Cole, City Clerk.

Plumbing.—Harry S. Shealey, 2310 Orleans St., Baltimore, Md., wants prices on plumbing.

Pump.—Hutton, Brown & Co., Watt & Clay Bldg., Roanoke, Va., want small gasoline-driven pump for pumping mine water, capacity from 500 to 750 gallons per hour, delivered at company's operation in Wise county, Virginia.

Road Construction.—Richland County Supervisor, W. F. Muller, Columbia, S. C., receives bids until noon September 14 for maintaining from October 1, 1912, to May 1, 1913, sections of roads, each one to five miles long; with each section to be furnished one, two or three split-log drags and necessary hand tools; during stated time each section must be dragged at least eight times and surface kept smooth; bids to be submitted on basis of specified price for each mile of road; for full information address County Supervisors; W. C. Thomas, clerk.

Road Roller.—Austin Bros., Atlanta, Ga., in market for second-hand four to six-ton tandem steam road roller; want cash prices and description.

Road Construction.—Duval County Commissioners, Courthouse, Jacksonville, Fla., receive bids until 10 A. M. July 19 to pave Lake Shore Boulevard from Ortega Rd. to Old Orange Park Rd.; specifications furnished on application to Gail L. Barnard, County Engineer. Address bids to C. W. Ellis, chairman County Commissioners.

Road Construction.—De Soto county will let contract August 5 at Hernando, Miss., for grading; amount about \$100,000. Address R. C. Clifton, clerk.

Road Construction.—Sealed proposals received by Road Commissioners, District 3, Noxubee county, at office in courthouse, Macon, Miss., until 2 P. M. August 7 for building about 24.5 miles sand-clay road; approximately 38,000 yards earth excavation and the hauling, placing and spreading of sand-clay required for surfacing. At same time and place same commissioners will also receive bids on construction of about 16 miles gravel road, this including about 29,000 yards earth excavation, with hauling, spreading and rolling of chert or gravel for surfacing; alternate proposals one (a) novaculite and (b) clay gravel will be asked. On both these proposals (25.5 miles sand-clay road and 16 miles gravel road) certified check for 3 per cent. of total amount of bid will be required; plans and specifications may be seen at office of commissioners at Macon, and at office of engineer, Wheelock Engineering Co., 923 Woodward Bldg., Birmingham, Ala.; N. Scales, L. F. Holberg, S. M. Thomas, Commissioners.

Road Construction.—Jackson County Commissioners, Scottsboro, Ala., receive bids until noon August 6 at Bass, on Talley Pike, near Stevenson, Ala., to grade, drain and macadamize part of Crow Creek Rd.; expenditure on State aid \$4000; at same time

county will award balance of road to Tennessee State line, expenditure about \$14,000; certified check \$400; W. S. Keller, State Highway Engineer, Montgomery, Ala.

Road Construction.—Butler County Commissioners, Courthouse, Greenville, Ala., receive bids until 10 A. M. August 7 to grade and surface with sand-clay about 12 miles State aid road; expenditure \$17,000; profile and specification on file with Probate Judge at Greenville; certified check \$400; W. S. Keller, State Highway Engineer, Montgomery, Ala.

Road Construction.—H. E. Helfman, Fort Myers, Fla., receives bids until noon August 1 to clear, grade and construct 10 miles water-bound macadam road between Whiskey Creek and Punta Rasa; work consists of 60 acres clearing, 50,000 cubic yards earth excavation, 175 cubic yards concrete culvert work and 420 feet vitrified pipe; profiles and specifications may be had on application; certified check \$1000.

Road Construction and Machinery.—West Plains Special Road District, West Plains, Mo., invites bids to grade and construct rock roads to cost \$20,000; also wants prices on engines, crushers and steam roller; J. A. Shepard, official in charge.

Safe.—White Furniture Co., Melsane, N. C., wants new or second-hand safe for post-office; 24x36x15 inside measurement.

Safe, etc.—J. Gaiser, Russellville, Ark., wants prices on safe, vault door and other bank fixtures for small bank at Phil Campbell, Ark.

Sawmill.—Cumberland Lumber Co., Sparta, Tenn., wants to buy or lease hand-mill outfit and steam log skidder; latter to handle large timber up steep hills from deep gulch.

Sewers.—See "Water-works, Electric Light Plant and Sewers."

Sewers.—Proposals on blank forms, furnished by city and addressed to chairman of "Board of Paving and Sewer Commissioners, Greenville, S. C.," received until 4 P. M. July 22 for furnishing all material and labor for constructing sanitary sewer extensions and intercepting sewer, as per plans and specifications adopted; work consists of about 10,000 linear feet 8-inch, 3000 linear feet 15-inch pipe sewers, 265 vertical feet manholes and 2500 cubic yards rock excavation; cost \$35,000; certified check for \$500; plans and specifications can be seen at office of City Engineer; specifications mailed upon application to him; C. P. Ballenger, City Engineer; W. E. Beattie, chairman.

Sewer Construction, etc.—Sealed proposals received by Council, Louisa, Ky., until 12 noon July 18 for construction of about 1000 feet 30 and 36-inch single-ring brick sewer and 800 feet tile sewer; also 23,000 linear feet combined concrete curb and gutter; plans and specifications at offices of John G. Burns, Mayor, and of John McMyer & Sons, engineers, Catlettsburg, Ky.; bids to be addressed to C. L. Miller, chairman street improvement committee.

Sewer Construction.—See "Paving, etc." Johnson City, Tenn.

Sewer Construction.—City of Tulsa, Okla., receives bids until July 12 at office of E. B. Cline, City Auditor, to construct concrete or brick storm sewers, concrete pipe storm sewer, etc.; plans, profiles and specifications on file with City Engineer, T. C. Hughes.

Sewer Construction.—Baltimore (Md.) Board of Awards will receive bids at office of City Register, City Hall, until 11 A. M. July 17 to construct miscellaneous sanitary lateral sewers; 11,000 linear feet vitrified-pipe sewers, 8 to 18 inches diameter, and 6500 linear feet vitrified-pipe house connections; plans on file with Calvin W. Hendrick, chief engineer Sewerage Commission; specifications and plans may be obtained at office of Sewerage Commission, 394 American Bldg.; charge of \$5 for each specification and blueprints; certified check, \$1200.

Screens.—G. J. Orr, 905 E. Henry St., Savannah, Ga., wants prices on screens for doors and windows.

Shafting.—See "Ginning Machinery."

Shingles.—J. Q. Dickinson, 1912 N. A St., Tampa, Fla., wants prices on 9000 feet asphalt shingles.

Steam Shovel.—Roger Moore's Sons Company, Box 191, Wilmington, N. C., wants No. 6 Thew steam shovel; good condition.

Store Fixtures.—Little Automobile Supply Co., S. C. Little, president, Spartanburg, S. C., wants 20 to 50 feet of counter showcases and other store fixtures.

Stone Tablets.—D. W. Wagner of Bristol, Tenn., wants prices on stone name tablets, etc., for school.

Telephone Parts.—See "Flint Mouth-piece."

Technical Novelties.—See "Machinery, etc."

Valves.—Sealed bids received at office of John M. G. Carrera, City Clerk, St. Augustine, Fla., until 7.30 P. M. July 24 and opened at regular meeting on that date for furnishing six or more automatic valves 8 to 16 inches diameter of discharge for preventing ingress of salt water, f. o. b. St. Augustine; bidders to furnish specifications with bid.

Vulcanizing Machinery.—Little Automobile Supply Co., S. C. Little, president, Spartanburg, S. C., wants vulcanizer for re-treading auto casings, stand for emery and buffing wheels, three to seven-horse-power, gas or coal boiler, two to five-horse-power motor, gasoline storage system, air compressor and tank.

Water-wheel.—See "Electrical Machinery, etc."

Water Heaters.—B. H. Stephens, Wilmington, N. C., wants prices on water heaters for hotel at Lumberton, N. C.

Water and Light Plant.—Sealed proposals addressed to City Clerk and endorsed "Proposals for municipal water and light plant," received by City Council of Grafton, W. Va., until 8 P. M. July 23, and then publicly opened, for furnishing tools, labor, material and equipment, and constructing proposed municipal water and light plant according to plans and specifications on file in office of W. C. Hanway, City Clerk; certified check 10 per cent. amount of proposal; plans and specifications can be seen and form of bid obtained at offices of City Clerk or of engineer, Riggs & Sherman Company, Toledo, O.

Water-works, etc.—City of Dothan, Ala., receives sealed bids until 12 noon August 5 for water-works and electrical machinery, including station building and reinforced concrete reservoir; also chimney 8x150 feet; chimney builder to furnish his own plans and specifications; machinery includes two steam boilers, 300 horse-power; 350-kilowatt generator set complete, including engine to run condensing, with all necessary auxiliaries and cooling tower; switchboard as per plans and specifications on file; electrically driven air compressor. For specifications, bidding rules, etc., address City Clerk; W. F. Thornton, Birmingham, Ala., is consulting engineer; B. R. Pilcher, chairman water-works committee.

Water-works.—Town of Scooba, Miss., R. A. Longmire, clerk, wants estimates on water-works for 1000 population.

Water-works and Electric System. Proposals on blank forms furnished by city and addressed to Mayor and Board of Aldermen, Claxton, Ga., received until 2 P. M. July 25 for furnishing material for water-works and electric systems, as per plans and specifications; about 130 tons 8 and 6-inch cast-iron pipe and 4 tons special castings; 16 fire hydrants, 15 valves and 11 valve boxes; tower and tank erected; 2 horizontal tubular boilers; feed-water heater and pump; 2 750-gallon pumps; 2 air compressors and receiver; 60-kilowatt alternating-current generator, with 3-panel switchboard; high-speed automatic engine; steam, air and hydraulic connections in plant; tungsten street-lighting regulator, lamps and line construction material, including transformers; bids received for whole or any part; certified check not less than 10 per cent. amount bid; plans and specifications can be seen at offices of engineer or of City Clerk, and specifications can be obtained from H. S. Jaudon Engineering Co., engineer, Box 582, Savannah, Ga.; J. P. Moore, Mayor; C. M. Rushing, Sr., clerk.

Water-works, Electric-Light Plant and Sewers.—Proposals received by Mayor and Board of Aldermen, Smithfield, N. C., until 2 P. M. July 31 for building water-works, electric-light plant and sewer system; water-works and electric-light plant combined in one; work will embrace fireproof building, return-tubular boilers, generators and engine, lighting system, steam and electric pumps, mechanical filters, coagulating and clear-water basins, pole lines and about 3½ miles six and eight-inch cast-iron water pipe laying, with hydrants and valves; sewerage will consist of about four miles pipe sewers, 8 to 12 inches diameter, and appurtenances; plans and specifications on file at office of Mayor and of Gilbert C. White, engineer, Charlotte, N. C.; copies of specifications, form of proposal, etc., obtainable from engineer; full set of blueprints furnished by engineer on payment of \$5; single prints 25 cents; certified check 5 per cent. of bid; James A. Wellons, Mayor.

Water-works Construction.—Proposals received by Mayor and City Council, Columbia, S. C., until 10 A. M. July 30 for construction of coagulating basin at water-works plant; concrete basin, 70x160 feet, divided longitudinally, and 12 feet deep; 20x70-foot brick headhouse; concrete tanks, piping, valves, equipment, etc.; plans and specifications on file at office of F. C. Wyse, engineering superintendent of water-works; copies of specifications, proposal forms, etc., obtainable from engineer after July 8 on payment of \$3.

Well-drilling.—Citizens' Development Co., U. S. Weddington, secretary-manager, Childress, Tex., will receive bids until July 15, to be opened July 16, for boring of test well.

Well-drilling.—Citizens' Development Co., U. S. Weddington, secretary-manager, Childress, Tex., will receive bids until July 15, to be opened July 16, for boring of test well.

Well-drilling Equipment.—W. H. Marshall, Elkton, Va., wants to buy equipment to drill well for water.

Wiring.—Harry S. Shealey, 2310 Orleans St., Baltimore, Md., wants prices on wiring.

Woodworking.—H. Jeff Davis, Waynesboro, Ga., wants information, etc., from manufacturers (in vicinity of Waynesboro) relative to manufacturing doors and drawers for sideboards made to specifications.

Woodworking Machinery.—R. A. Chote, Frankfort, Ky., wants prices on machinery (direct connected to electric motors) for manufacturing sash, doors, blinds, etc.

INDUSTRIAL NEWS OF INTEREST

Opens Branch in Pittsburgh.

The Brownell Company of Dayton, O., manufacturer of high-grade engines, boilers, feed-water heaters, etc., has opened a district office at 1418 Oliver Bldg., Pittsburgh. This office is in charge of B. S. Rederer.

Selden-Breck Construction Co.'s Contract.

Among the contracts recently secured by the Selden-Breck Construction Co. of St. Louis is that for the erection of the Hippee-Polk office building at Des Moines, Ia. This 12-story steel fireproof structure will cost approximately \$500,000. The Selden-Breck company also maintains offices at Louisville, Ky., and St. Joseph, Mo.

A Southern Service Corporation.

A company has been organized with offices at 338 W. Forsyth St., Jacksonville, Fla., for the purpose of handling and dealing in good-roads machinery and its allied trades articles. This organization is known as the Southern Service Corporation of Florida. It will make a study of good-roads requirements, and will endeavor to supply all kinds of good-roads machinery promptly.

Repeat Orders for Gas Machines.

The C. M. Kemp Manufacturing Co., 405 Oliver St., Baltimore, has just been awarded an additional contract by the Navy Department for a Twentieth Century Gas Machine for the Navy-yard at Mare Island, Vallejo, Cal. A number of these gas machines have been previously installed at the Mare Island Navy-yard. Shipment of the latest machine ordered was made immediately upon receipt of the contract. The contract was secured through the San Francisco agent, the N. K. Davis Machine Works.

Free Samples of Advertising Novelty.

The extensive use of various mediums to supplement the regular advertising of manufacturing companies, merchants and dealers in all forms of machinery and merchandise has been considered in the design of an advertising novelty noted in this issue in our Classified Opportunities columns. This novelty is described as having many features to make it of holding interest to the recipient and such as to present the advertising feature of any particular firm or business in a prominent way. It may also be sold without the advertising feature, if preferred, by dealers in novelties. A free sample and full explanation will be sent on request from firms, companies or dealers.

Storage Battery Depot in Kansas City.

The Electric Storage Battery Co. of Philadelphia has opened a new "Exide" battery depot at 1329 Walnut St., Kansas City, Mo. At this depot will be carried complete "Exide," "Hycap-Exide," "Thin-Exide" and "Ironclad-Exide" batteries for electric vehicles, also renewals and spare parts; a complete line of the new "Exide" battery for automobile lighting and self-starting, and the standard "Exide" battery for gas-engine ignition. Besides this Kansas City depot, the Electric Storage Battery Co. has depots in Philadelphia, New York, Boston, Cleveland, Chicago, St. Louis, Atlanta, Denver and San Francisco.

Lewis Publishing Co.'s Sale Completed.

The third day's sale of the Lewis Publishing Co.'s property completed the sales made by J. E. Conant & Co., auctioneers, Lowell, Mass. The first two days' sales were previously referred to in these columns, and the last day's sale, on July 2, at Clayton, Mo., included the Academy of Fine Arts, which was sold to Matthew G. Reynolds, receiver People's Savings Trust Co. of St. Louis, for \$81,000. The other important property included in this sale, the Fiber Stopper plant, was sold to the same purchaser for \$21,000. Including the outstanding taxes, these two properties sold for \$109,642.72. The aggregate of the three days' sales was \$341,752.16.

Flomerfelt Patent Rail Tie.

A railroad tie designed by J. E. Flomerfelt of Taft, Fla., has for its object the production of a tie which is self-tamping and will not settle into the roadbed. Other advantageous features claimed for it are that the tie cannot slip sideways on curves; that the rails may be easily secured in place or removed without spikes, bolts or fishplates. The tie is constructed of metal and wood, so arranged that the wood will form an efficient cushion for the rolling stock. It is claimed that the tie is simple, strong and durable, and can be relied upon as a means for preventing spreading or sagging of the rails. Complete information regarding this improved railroad tie may be obtained by addressing the inventor.

Opportunity for Technical Writers.

A monthly magazine to be issued under the title of "Steam Machinery" is to be published for the Clyde Iron Works of Duluth, Minn., by Charles H. Mackintosh. The magazine will contain departments devoted to the interests of lumbermen, contractors, railroad builders, etc. Contributions of a technical or otherwise interesting nature are invited by Mr. Mackintosh. All articles should be submitted to him in typescript. Each article will be accepted or rejected within a month from date of receipt, and if accompanied by stamped addressed envelope will be returned when not accepted. Accepted articles will be paid for immediately after publication at a rate determined by their interest and value.

Reversible Metal Shingle & Manufacturing Co.

Land, machinery, etc., for the plant of the Reversible Metal Shingle & Manufacturing Co., Halifax, N. C., have been purchased, and the building material has been placed upon the ground. Gasoline engines for producing power for the plant have not yet been purchased, and the company will receive prices on this equipment. The work of construction will be rapidly prosecuted, and it is expected that the product of this company will be placed on the market within the next two months. This company will manufacture reversible metal shingles at the rate of about 60 to 75 squares per day from the beginning. The officers of the company are E. H. Hale, president; E. O. Vaughan, vice-president; J. L. Weller, secretary, and R. H. Merchant, treasurer. A general manager has not yet been selected.

Consolidated Overhead Irrigation Co.

A company has been organized at Rome, Ga., with a capital stock of \$1,200,000 to manufacture overhead irrigation systems, complete. It is known as the Consolidated Overhead Irrigation Co., and has bought several important patent rights for construction of systems of overhead irrigation for farms, orchards, hothouses, etc. These patents include those of DeLong, Skinner, Chapman and others. All the patents used in the system, from the making of the galvanized-iron pipes to the wire that is used extensively in the construction, will be made in the Rome plant, and the raw material required, such as pig-iron, coal, etc., will be obtained in that market. It is expected that the first plant will cost about \$50,000. The main office will be in Rome, Ga. The officers of the company are J. L. Bass, president; S. P. Coalson, vice-president, and B. B. Kendrick, secretary and treasurer. Inquiries regarding this company should be addressed to the secretary.

Air Compressor Furnace Blowers.

The advantage of using air compressors for service with blast-furnace blowers are resulting in their adoption in many industrial plants, including iron and steel mills.

Within the past month the General Electric Co., Schenectady, N. Y., has received a number of orders for multi-stage centrifugal air compressors to be used in connection with blast-furnace blowers. The E. & G. Brooke Co., Birdsboro, Pa., has purchased a compressor of 25,000 cubic feet per minute capacity and 15 to 25 pounds pressure, driven by a high-pressure steam turbine. A 13,000 cubic foot per minute compressor driven by a mixed-pressure turbine was purchased by the Chattanooga Coal & Iron Co., Chattanooga, Tenn., and three 40,000 cubic feet per minute compressors driven by a high-pressure steam turbine were purchased by the Woodward Iron Co. of Woodward, Ala. These compressors range from 15 to 30 pounds pressure. The General Electric Co. has six multi-stage air compressors already installed as blast-furnace blowers. The principal advantages of this type of compressors are the great saving of floor space and weight, a large saving of oil supplies and maintenance and excellent control of the required volume of air against whatever pressure may be required.

New Members With Ford, Bacon & Davis.

Chas. F. Uebelacker, Chas. N. Black and Wm. Von Phul have been admitted to partnership in the firm of Ford, Bacon & Davis, engineers, 115 Broadway, New York. This firm was established in 1894 and has built up an experienced organization. With these new partners it is in a position to considerably extend its present engineering and management facilities for investigations and reports, and for the designing, construction and operation of public utility and engineering enterprises generally. These include urban and interurban electric railroads, elevated railroads and subways, electric power and lighting systems, hydro-electric and steam-power plants, artificial and natural gas developments, water storage, irrigation and reclamation projects. The company maintains a branch office at 921 Canal St., New Orleans, La. The new partners have been actively engaged in engineering work for over 20 years.

Sales Manager of Epping-Carpenter Company.

The position of general sales manager of the Epping-Carpenter Company, Pittsburgh, manufacturer of pumping machinery, has been accepted by Reuben Bowen. Mr. Bowen was connected with the International Steam Pump Co. for over 15 years in the capacity of district and department sales manager. Other positions formerly occupied by Mr. Bowen were: General sales manager of the Fred M. Prescott Steam Pump Co. at Milwaukee, and of the Jeansville Iron Works Co. of Hazleton, Pa. The organization of the Epping-Carpenter Co. has been in existence over 60 years. The shops of the company are modernly equipped for producing direct acting and high duty crank and flywheel pumping engines. Mr. Bowen's connection with the Epping-Carpenter Company, with the extensive experience which he has gained, is an indication of the progressive policy maintained by this company.

Powell Engineering Specialties.

Charles E. McFarlan has been elected president of the William Powell Company of Cincinnati, following the decease of Mr. Albert, formerly president of the company. H. H. Coombe is vice-president and treasurer, and Geo. E. Wietkamp is secretary. The William Powell Company was established in 1846. The business of the company for the past six months has been much larger than for any other half year in the 66 years of its existence. The company is in a prosperous condition, and is doing a large amount of business, with prospects of its continuation. The company manufactures an extensive line of "dependable" engineering specialties, including the Powell White Star valve, Powell Union Disc valve, etc. One of the advantages of the Powell White Star valve is that it has two faces. By the time each of these has been reground it is probable that the pipe line would have to be renewed. The Powell Union Disc valves are fitted with special vulcanite composition discs which are interchangeable and easily renewed.

The Lima Locomotive Corporation.

The Lima Locomotive Corporation of Lima, O., recently organized, has taken over the Lima Locomotive & Machine Co. The latter company has for many years manufactured geared locomotives, and for the past ten years has been building a steadily increasing output of railway locomotives.

until further extensions have now become necessary. The new corporation owns 43 acres of land at Lima, O., on which there is a modern plant having a capacity of 400 engines per year. The Lima Locomotive Corporation has sold to Redmond & Co., 33 Pine St., New York, the entire issue of \$2,000,000 first mortgage 6 per cent. bonds. The proceeds of this sale will be used for the erection of additional buildings, purchase of equipment and for working capital. The new plant will provide employment for 1000 men. It is stated that the net earnings for the past seven years, after deductions for depreciations, have averaged two and one-third times the interest on the new bonds. The officers of the old company continue with the new, and are A. L. White, president; G. L. Wall, vice-president; W. T. Agter, secretary and treasurer; Merle Middleton, chairman of the board. These officers, together with O. J. Thomen of Redmond & Co., form the board of directors.

TRADE LITERATURE.

"The Gateway to Panama."

In the interest of the Gulf, Florida & Alabama Railway, Megargel & Co., bankers of New York, are circulating a handsomely illustrated booklet entitled "The Gateway to Panama," setting forth a non-technical summary of several reports on the project which contemplates a railway now operating and under construction from the deep-water harbor of Pensacola, Fla., to a connection with the Illinois Central and the St. Louis & San Francisco lines in the heart of the Alabama coal fields.

Grinnell Automatic Sprinkler Bulletin.

Much interesting information regarding the use of automatic sprinklers is contained in the July issue of Grinnell Automatic Sprinkler Bulletin, published by the General Fire Extinguisher Co., Providence, R. I. Striking illustrations are shown of buildings partly protected by sprinklers in which fires originating in unprotected parts of the building were stopped on reaching the sections in which the sprinklers were located. Many other accounts are given in which fires were stopped in their incipency by the action of the automatic sprinklers. The use of sprinkler gongs, by which alarm is given as soon as the sprinkler begins to operate, is also illustrated. The record is included of 198 fires in which the average loss by fire where Grinnell sprinklers were used is only \$296.62.

Caldwell Products.

The Caldwell "air cooled" air compressor, designed to supply the demand for capacities ranging from four cubic feet of free air per minute to 25 cubic feet, in six sizes, is illustrated and described in a circular issued by E. R. Caldwell & Co., Bradford, Pa. These compressors fill the demand for machines below the capacity usually furnished. The cooling principle is the same as that employed in the manufacture of air-cooled automobile engines, and the cost of installation is greatly reduced, as no water tank or water pipe is required, and there is no danger of freezing. These compressors are built with single or double cylinders, as may be required. Caldwell hydraulic wheel presses are illustrated and described in a catalogue issued by the same company. Dimensions and capacity tables and a list of users of the Caldwell wheel presses are included in the catalogue.

Daum Fuses for Power Circuits.

The Daum reliable cartridge fuse shells for electric-light and power circuits, as manufactured by the A. F. Daum Company, Pittsburgh, are illustrated and described in catalogue No. 15, recently issued by the company. The fuse wire is regulated in size to carry a certain number of amperes and to melt and open the circuit in case of overload. For safety the Board of Underwriters recommended the use of enclosed fuses to guard against the hot metal scattering around and possibly setting fire to material near it. The Daum fuse shell is designed as a cover and holder for this fuse element and is made in various sizes to conform to the National Electric Co.'s standard. These reliable fuse shells are made in stock types for lower voltages, and can be made to special measurements as required for circuits of 2000 to 20,000 volts. This catalogue will be sent to interested persons on request.

Mechanical Filtration of Water.

The New York Continental Jewell Filtration Co., 15 Broad St., New York, is the general contractor under the New York, Continental, Jewell, Warren, Hyatt, Blessing and

American patents for manufacturing mechanical filtration and water purification plants for residences, public institutions, office buildings and public water supplies, etc. The various types and capacities of pressure filters manufactured by this company are described and illustrated in the 1912 catalogue. It is stated that over 300 municipal plants are now in successful operation. Its factory is exclusively devoted to the manufacture of filters. Its products are the result of 30 years of experience and practical work in water purification, during which time nearly 400 patents have been issued for improvements. In addition to this catalogue on mechanical filtration the company also publishes a "Gravity Filter" catalogue.

Mine and Quarry Machinery.

The Sullivan mine and quarry machinery as manufactured by the Sullivan Machinery Co., 122 S. Michigan Ave., Chicago, is described and illustrated in "Mine and Quarry," published by the company. In its last issue special reference is made to the Sullivan air compressors operated by Smith, Hauser, Locher & Co. of New York in their work on the Catskill Aqueduct in New York city. Other machinery illustrated includes the Sullivan light-weight drill as used in coal mines and quarries; Sullivan channeling machines as used in marble quarries; Sullivan tripod drills and tunneling equipment. It is stated that more than 30 separate types and sizes of Sullivan diamond drills are available to meet accurately any working conditions, and that these machines have been perfected by 35 years of use and development. The company has branches in many cities, including Birmingham, Ala.; El Paso, Tex.; Huntington, W. Va.; Joplin, Mo.; Knoxville, Tenn., and St. Louis, Mo.

Lubrication of Gasoline Engines.

Proper lubrication of gasoline-engine cylinders requires oil having special features, and different kinds and makes of engines require somewhat different oils. The high temperature which exists in the cylinders of gasoline engines necessitates the use of special grades of oil that will not vaporize or decompose and leave a deposit of carbon. Booklet No. 117, issued by the Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, and 50 Church St., New York, describes the use of "Rockford" cylinder oil and states that it has been selected after thorough tests for use in air-cooled engines. Illustrations of "Rockford" railway motor cars and information regarding their use are also included in this booklet. It is explained that the use of graphite increases the power and efficiency of engines by reducing leakage past the piston rings, and is otherwise of great value when used in connection with lubricating oils for gasoline-engine cylinders. The No. 2 and No. 5 "Rockford" railway cars are illustrated in the booklet.

Foundry Company's Annual Report.

The report of the United States Cast Iron Pipe & Foundry Co. for the year ending May 31, 1912, shows a profit for the year of \$527,977 and a balance of \$672,858. Accounts were audited by Lybrand, Ross Bros. &

Montgomery. The company's general offices were removed during the year to its own building at Burlington, N. J. The home office is 15 Exchange Place, Jersey City. New York office is 71 Broadway and general sales office, Morris Bldg., Philadelphia. During the year the sum of \$494,000 was expended on the new plant at Birmingham, Ala. The plans for increasing efficiency and further perfection of shop practice throughout the various plants have not required additional financing beyond such expenditures as the company could afford to make out of its present resources. The excellent financial condition of the company is indicated by the report, which shows a net working capital of \$3,545,246. L. R. Lemoine is president of the company and the executive committee is composed of A. N. Brady, Colgate Hoyt and A. C. Overholt.

Fort Wayne Motor Drives.

Among the recent bulletins issued by the Fort Wayne Electric Works of General Electric Co., Fort Wayne, Ind., is bulletin No. 1139, entitled "Fort Wayne Motor Drives." It is comprised entirely of illustrations of machinery, tools, cement mills, cranes, fans, blowers, etc., operated by means of Fort Wayne electric motors. These pictures serve to show the completeness of the Fort Wayne line of motors and the company's ability to solve power problems. Bulletin No. 3053 is an instruction book for installing and operating multiphase revolving field alternating current generators and belted exciters. Bulletin No. 1135 illustrates and describes the direct connected type MPL direct current generators; No. 1137 treats of belt-driven revolving field alternators, and No. 1149 treats of single-phase repulsion induction motors. These bulletins are prepared in suitable form for filing, so that a complete file of this company's publications may be easily maintained.

Artistic Brick.

An essential quality for artistic brick is its durability to withstand the ravages of time and the elements. History reveals that a well-made brick is one of the most durable of building materials. After durability, the most important quality is that of color. Every shade and color may be made by scientific firing, so that a brick wall may be made to fairly sparkle with color, animation and interest. A booklet, entitled "Artistic Brick," has been published by the Hydraulic-Press Brick Co. for the purpose of more thoroughly familiarizing architects and prospective builders with the brick of various colors and high quality made by that company. The booklet contains information on the manufacture of brick and many illustrations of the brick made at its different plants. These illustrations show the brick in its natural texture and in the various colors. The Southern offices of this company include those at Central National Bank Bldg., St. Louis, Mo.; Colorado Bldg., Washington; Gumbel Bldg., Kansas City. Fredenberg & Lounsbury are the New York agents, 384 Fourth Ave. Architects and prospective builders may obtain this booklet by addressing the nearest office.

MOTOR VEHICLES AND TRACTORS.

Schacht Motor Car Co.'s Sales.

President G. A. Schacht of the Schacht Motor Car Co., Cincinnati, who has been spending a few months on the Pacific coast, states that over 100 different makes of automobiles are sold in Los Angeles alone, and that more than 250 Schacht cars were placed in that territory within the last year. According to the contract with the agency, 500 cars must be sold by January 1, 1913. Orders have just been received from the Los Angeles agent for 65 cars. Mr. Schacht states that he has heard the most favorable comments on all sides regarding the great showing the Schacht car made in the Indianapolis race on Decoration Day. The Los Angeles market has also taken a number of Schacht motor trucks. President Schacht has concluded a contract covering the Hawaiian Islands for the sale of 100 cars. The first six carloads under this contract have already been shipped.

The Alco Freighters' Progress.

More than 100 miles a day has been made by the Alco truck engaged in the transcontinental delivery of freight in its run from Philadelphia to Petaluma, Cal. It has kept strictly up to schedule and has averaged 12 miles an hour on the run. From Philadelphia the main route was through New York, Albany, Syracuse, Buffalo, Toledo, Chicago, Des Moines, and it will continue through

Denver, Cheyenne, Salt Lake City, Sacramento and San Francisco to Petaluma. Two drivers are piloting the truck. The cargo consists of three tons of goods shipped by Charles W. Young & Co. of Philadelphia. The total distance is 4136 miles. Records will be kept of the operating cost with a view to showing the relative economy of motor trucks and railroads for interurban hauling in various parts of the country. Alco trucks are manufactured by the American Locomotive Co., 63d St. and Broadway, New York.

G. M. C. Trucks Displace Horses.

The James Butler line of grocery stores, which includes over 200 retail stores in the vicinity of New York alone, is selling its horses at auction in order to replace them promptly by motor-truck delivery service. Trucks manufactured by the General Motors Truck Co. of Detroit have been used by the Butler house for over two years, and the service has been found so efficient and uniform that these trucks are now being purchased to replace the horses sold. In its announcement the Butler company states that "to insure the greatest satisfaction to customers by the quickest daily distribution of fresh food supplies to our stores a change has been made gradually from horse trucks to motor transportation with its bigger loads and quicker runs. A large fleet of motor

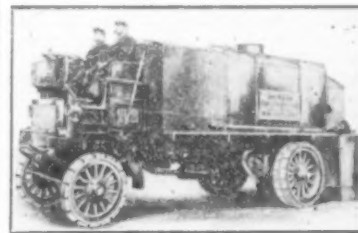
trucks is now in commission. The splendid service given by the trucks of the General Motor Co. has made this change practicable." It is stated that this action wipes out the horse equipment of the company.

"Little Giant" Handbook.

A handbook for operators of gasoline motor trucks in general, and the "Little Giant" commercial car in particular, has been issued by the Chicago Pneumatic Tool Co., Fisher Bldg., Chicago, and 50 Church St., New York, the manufacturer of this car. A large amount of information regarding the handling and care of gasoline cars is included in the booklet, which is No. 114, of the Chicago Pneumatic Tool Co. Detailed statements are given on such matters as uncrating and removing the car from the railroad train, getting the car ready to start after unloading, the details of setting spark control levers, adjustments of the different parts, how to reverse and run at different speeds and how to supply the correct amount of lubricant, and the corrections for troubles as they occur, together with a statement as to the indications of such trouble, unfamiliar noises, etc. The booklet is illustrated so that the descriptions may be easily understood. This booklet will be sent to prospective purchasers on request to the company at either of these addresses.

Motor Road Oil Sprinklers.

The importance of spraying macadam roads with oil for laying the dust and for preserving the roads from the disintegrating action of traffic has led to the development of motor spraying wagons for distributing crude oil. The first method of accomplishing this was by means of ordinary sprinkler carts, merely substituting oil in place of water in the tanks. As crude oil is more viscous than water it does not flow readily from the ordinary water spraying nozzles under simple gravity pressure and does not spread effectively when thus used. To insure the best results of oil treatment it has been found that it is important that the upper surface of the road be uniformly saturated with the oil. In order to produce



KNOX ROAD OIL SPRINKLER.

results power-operated pumps have been adopted for use to produce pressure in the tanks, which spreads the oil equally over the roadbed. The accompanying illustration shows a motor truck with this system of oil spraying as made by the Knox Automobile Co., Springfield, Mass., for the American Car Sprinkler Co. of Worcester, Mass. This truck is equipped with a tank holding about 1200 gallons of oil, and has a powerful circulating pump, driven directly from the transmission shaft, forcing the oil under pressure through a series of small nozzles so arranged as to secure a uniform distribution. The pump can be readily thrown in or out of action by the driver, and the nozzles are also regulated without leaving the seat.

Training of Motor Experts.

Hundreds of graduates from various technical schools of the country are annually enrolled in the electrical industry for the three years' post-graduate shop course. At the end of this time many are assigned to responsible shop positions and others are sent to the field force. In a similar way there is a tendency in the automobile industry to train mechanical experts for shop and field work. The importance of the salesman being familiar with the mechanical points in whatever line of machinery his sales are included is well recognized. While it is possible for the ordinary salesman to sell intricate mechanism, the really successful salesman should possess a knowledge of the product which he sells that will enable him to talk intelligently upon any phase of its construction. Besides this, such knowledge frequently proves of value in being able to combat the complaints which may be made in regard to the machinery which he is selling and to bring out fully the advantages. Such salesmen raise the level of the selling force to such an extent that it instills greater confidence in the buyer. Recognizing these facts, the makers of the Mitchell motor car are planning to develop

trained men for the responsible positions in the rapidly growing plant and extensive field force of the Mitchell-Lewis Motor Car Co., Racine, Wis. A course of three years' shop practice and study under contract is being considered. Young men under this agreement will be given service in every department, commencing with the simple operations of manufacture and going on through to the final testing department, from which promotions to all the higher offices will be open, as the fitness of the employe may be found suited to the work.

Mack Trucks With Power Winches.

The International Motor Co., Broadway and 57th St., New York, has sold, through its New England agent, a four-ton Mack truck equipped with power which to the New England Telephone & Telegraph Co. That company has placed the truck in service in Boston. Various telephone interests throughout the country now own 50 of these power-winch trucks, and they are increasing their equipment of these trucks constantly. Various ways in which they are used make them of particular value to these companies. The power winch is used for hoisting heavy articles and has been applied to delivering and setting telephone poles, digging the holes, and in other ways adding to economical construction of telephone and telegraph lines.

FINANCIAL NEWS

Review of the Baltimore Market.

Office MANUFACTURERS RECORD,

Baltimore, Md., July 10.

In the Baltimore stock market during the past week the effects of the hot weather were reflected in the general quiet, and the heat, together with the holiday of the Fourth, combined to reduce the volume of business.

The trading showed sales as follows: United Railways common, 25 1/4 to 25; do. income bonds, 65 1/4 to 65; do. funding 5s, 80 to 90; do. notes, 103 to 102 1/4; do. 4s, 85 1/4 to 85; Consolidated Gas, Electric Light & Power common, 115; do. preferred, 112 1/2 to 112; do. 4 1/2s, 90 to 89 1/4; do. notes, 100 1/4; Consolidated Gas 4 1/2s, 97 1/4; Seaboard Air Line preferred, 54 1/4; do. 4s, stamped, 87 1/4; Mt. Vernon-Woodbury Cotton Duck 5s, 74 1/4 to 75; G. B. S. Brewing 4s, 50 1/4 to 52 1/4.

Bank stock sold as follows: Merchants', 181; Citizens', 42 1/4; First National, 136; Mechanics', 30; Bank of Baltimore, 165; Western, 37 1/2.

United States Fidelity sold at 182; Baltimore Trust, 162; Maryland Casualty, 90 1/2; American Bonding, 76 1/2; Fidelity & Deposit, 151 1/2 to 152.

Other securities were traded in thus: Consolidation Coal, 105; do. refunding 5s, 93 1/4 to 93 1/2; do. do. 4 1/2s, 93 to 92 1/2; Fairmont & Clarksburg Traction 5s, 100 1/4 to 100; Houston Oil common, trust certificates, 16 to 15 1/4; do. preferred, 69 1/4 to 71, reacting to 70; do. dividend certificates, 87 to 88 1/2; Northern Central Railway stock, 126 1/2; Atlantic Coast Line convertible debenture 4s, 104 1/4; do. Connecticut 5-20s, 93; Maryland Electric 5s, 98 1/4; New Orleans, Mobile & Chicago 5s, 89 1/4 to 89 1/2; Baltimore City 3 1/2s, 1980, 87 1/2 to 87 1/4; do. 4s, 1951, 100; do. 3 1/2s, 1930, 93 1/4; do. do. 1928, 93 1/4; do. 4s, 1960, 100; City & Suburban (Baltimore) 5s, 104 1/2; Norfolk & Atlantic Terminal 5s, 94 1/2; Pennsylvania Water & Power common, 64 to 64 1/2; do. 5s, 90 1/4; New Orleans Great Northern 5s, 69 1/2; Newport News & Old Point 5s, 98 1/2; Norfolk & Portsmouth Traction 5s, 89 1/4; Georgia Southern & Florida 5s, 106 1/4; Chicago Railways 5s, 100 1/4; Monongahela Valley Traction preferred, 84; Macon Railway & Light 5s, 100 1/2; Augusta & Aiken common, 28 1/2; Norfolk Railway & Light 5s, 100 1/4; Baltimore Electric 5s, stamped, 98; do. preferred stock, 44; Columbia & Greenville 6s, 105 1/4; Macon, Dublin & Savannah 5s, 100 1/2; Baltimore Brick 5s, 82; Coal & Iron Railway 5s, 101 1/2; Portland Railway 1st and refunding 5s, 101 1/2 to 101 1/4; Baltimore & Annapolis Short Line 5s, 76 1/2; Washington, Baltimore & Annapolis 5s, 89 1/2.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended July 10, 1912.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast Line.....	100	139 1/4	140 1/4
Atlantic Coast of Conn.....	100	269	275
Georgia Sou. & Fla. 1st Pfd.....	100	96	98
Georgia Sou. & Fla. 2d Pfd.....	100	80	82
Maryland & Pennsylvania.....	100	29 1/2	30
Seaboard Com.....	100	25 1/4	25 3/4

Seaboard Pfd.....	100	52	53
United Rys. & Elec. Co.....	50	24 1/2	25
Bank Stocks.			
Bank of Baltimore.....	100	164	165 1/2
Brokers & Merchants.....	100	210	...
Farmers & Merchants.....	40	51 1/2	...
First National.....	100	133	140
German.....	100	108	111
Howard.....	10	14	...
Marine.....	30	42 1/2	...
Mechanics.....	10	...	20 1/4
Merchants.....	100	180	182
Western.....	20	37	...
Trust, Fidelity and Casualty Stocks.			
Baltimore Trust.....	100	162 1/2	...
Continental Trust.....	100	222	232
Fidelity & Deposit.....	50	151 1/2	153
Maryland Trust.....	100	110 1/2	115
Maryland Casualty.....	25	96 1/2	...
Mercantile Trust & Deposit.....	50	152	...
Union Trust.....	50	63	...
Miscellaneous Stocks.			
Baltimore Brick.....	100	1	3
Baltimore Brick Pfd.....	100	20	...
Baltimore Electric Pfd.....	50	43	44
Con. Cotton Duck Com.....	50	15	...
Con. Cotton Duck Pfd.....	50	15	...
Con. Gas, Elec. Lt. & P. Com.....	100	115	...
Con. Gas, Elec. Lt. & P. Pfd.....	100	112	113 1/2
Consolidation Coal.....	100	104	105
G. B. S. Brewing Co.....	100	4 1/2	5
Georges Creek Coal.....	100	1/2	...

Railroad Bonds.			
Atlantic Coast 1st 4s.....	94 1/2	...	...
Atlantic Coast Conv. Deben. 4s.....	103 1/2	104 1/2	...
At. Coast (Conn.) 1st 4s, Cts. 5-29s.....	92	93 1/2	...
Augusta Terminal 5s.....	105 1/2	106 1/2	...
Balto. & Harborsburg 5s.....	91 1/2	92 1/2	...
Charleston & West. Car. 5s.....	105 1/2	106 1/2	...
Coal & Coke Railway 5s.....	91	94	...
Coal & Iron Railway 5s.....	100 1/2	102	...
Col. & Green 1st 6s.....	105	106 1/2	...
Georgia & Alabama 5s.....	105	106 1/2	...
Georgia & Alabama Term. 5s.....	104 1/2	...	...
Georgia Pacific 1st 6s.....	112	...	...
Georgia Southern & Fla. 1st 5s.....	106 1/4	106 1/2	...
Macon, Dublin & Savannah 5s.....	100 1/2	...	...
Norfolk & Carolina 5s.....	111	...	...
Maryland & Penna. Ter. 5s.....	104	...	...
Potomac Valley 1st 5s.....	107	108	...
Savannah, Fla. & West. 5s.....	109 1/2	110	...
Seaboard 4s, Stamped.....	87	88	...
Seaboard Adjustment 5s.....	89 1/2	...	...
Seaboard & Roanoke 5s.....	105	106	...
Virginia Midland 3d 6s.....	104 1/4	105 1/2	...
Virginia Midland 5th 5s.....	105	105 1/2	...
Western Maryland 4s.....	86 1/2	87	...
Western N. C. Con. 6s.....	102 1/2	...	...
Wilmington & Weldon 5s.....	109 1/4	110 1/2	...
Washington & Vandemere 4 1/2s.....	92	96	...
Street Railway Bonds.			
Anacostia & Potomac 5s.....	90 1/2	100	...
Atlanta Con. Street Railway 5s.....	105	105 1/2	...
Baltimore, Sp. Pt. & C. 4 1/2s.....	97 1/2	...	...
Baltimore Traction 1st 5s.....	106	...	...
Baltimore Traction (N. B.) 5s.....	109 1/2	...	...
Charleston City Railway 5s.....	104 1/2	...	...
Charleston Con. Electric 5s.....	95 1/2	96 1/2	...
Chattanooga Electric 5s.....	97	...	...
City & Suburban 5s (Balto.).....	105 1/2	...	...
City & Suburban 5s (Wash.).....	103 1/2	106	...
Fairmont & Clarksburg Traction 5s.....	100	100 1/2	...
Knoxville Traction 5s.....	105	106	...
Macon Railway & Light 5s.....	100 1/2	100 1/2	...
Maryland Electric Railways 5s.....	98 1/2	99	...
Norfolk & Portsmouth Traction 5s.....	89 1/2	90	...
Norfolk & Atlantic Ter. 5s.....	90 1/2	90 1/2	...
United Railways 1st 4s.....	85 1/2	85 1/2	...
United Railways Income 4s.....	65	65 1/4	...
United Railways Funding 4s.....	89 1/2	...	...
United Railways Notes.....	102	102 1/2	...
Virginia Railway & Power 5s.....	96	...	...
Miscellaneous Bonds.			
Ala. Con. Coal & Iron 5s.....	72	75	...
Baltimore Electric 5s, Stp.....	97 1/2	98	...
Consolidated Gas 5s.....	108 1/2	...	...
Con. Gas, Elec. Lt. & P. 4 1/2s.....	89 1/2	90	...
Consolidation Coal Refdg. 5s.....	93 1/2	93 1/2	...
Consolidation Coal Refdg. 4 1/2s.....	92 1/2	93	...
Fairmont Coal 1st 5s.....	90 1/2	90 1/2	...
G. B. S. Brewing 1st 5s.....	52	52 1/2	...
G. B. S. Brewing Inc. 5s.....	14 1/2	16	...
Jamison C. & C. G. C. 5s.....	92 1/2	93 1/4	...
Mt. Vernon-Woodbury Cot. Duck 5s.....	74 1/2	75	...

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending July 8.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	75	...
Aiken Mfg. Co. (S. C.).....	55	...
American Spinning Co. (S. C.).....	162	...
Anderson Cotton Mills (S. C.).....	48	...
Anderson Cot. Mills (S. C.) Pfd.....	100	...
Arcadia Mills (S. C.).....	90	...
Arkwright Cotton Mills (S. C.).....	99	100
Belton Mills (S. C.).....	100	110
Brandon Mills (S. C.).....	90	...
Brogan Mills (S. C.).....	60	...
Chiquola Mfg. Co. (S. C.).....	160	...
Clinton Mfg. Co. (S. C.) Pfd.....	97	...
Clinton Cotton Mills (S. C.).....	120	...
Courtney Mfg. Co. (S. C.).....	93	...
Dallas Mfg. Co. (S. C.).....	99	...
D. E. Converse Co. (S. C.).....	76	...
Drayton Mills (S. C.).....	90	...
Eagle & Phenix Mills (Ga.).....	106	...
Easley Cotton Mills (S. C.).....	162	175
Enoree Mfg. Co. (S. C.).....	25	62
Enoree Mfg. Co. (S. C.) Pfd.....	85	100
Gaffney Mfg. Co. (S. C.).....	72	75
Gainesville Cotton Mills (Ga.).....	72	80
Glenwood Cotton Mills (S. C.).....	140	140
Graniteville Mfg. Co. (S. C.).....	130	145
Greenwood Cotton Mills (S. C.).....	57	60
Grendel Mills (S. C.).....	90	100
Hartsville Cotton Mill (S. C.).....	160	...
Henrietta Mills (N. C.).....	160	175
Inman Mills (S. C.).....	100	...
King Mfg. Co. J. P. (Ga.).....	85	...
Lancaster Cotton Mills (S. C.).....	130	...
Lancaster Cot. Mills (S. C.) Pfd.....	97	100
Langley Mfg. Co. (S. C.).....	75	...
Laurens Mills (S. C.).....	125	...
Limestone Mills (S. C.).....	155	160
Lockhart Mills (S. C.).....	60	...
Lockhart Mills (S. C.) Pfd.....	90	100
Loray Cotton Mills (N. C.) Pfd.....	95	...
Marlboro Cotton Mills (S. C.).....	75	...
Mills Mfg. Co. (S. C.).....	90	102
Molloy Mfg. Co. (S. C.).....	90	...
Monaghan Mills (S. C.).....	100	...
Monarch Cotton Mills (S. C.).....	110	...

Newberry Cotton Mills (S. C.).....	125	130
Ninety-Six Cotton Mill (S. C.).....	130	150
Norris Cotton Mills (S. C.).....	90	93
Pacolet Mfg. Co. (S. C.).....	72	90
Pacolet Mfg. Co. (S. C.) Pfd.....	72	100
Parker Common.....	20	20
Parker Pfd.....	43	63
Pelzer Mfg. Co. (S. C.).....	120	120
Poe Mfg. Co. F. W. (S. C.).....	110	115
Saxon Mills (S. C.).....	110	120
Spartan Mills (S. C.).....	110	125
Trion Mfg. Co. (Ga.).....	130	130
Tucapau Mills (S. C.).....	300	350
Union-Buffalo (S. C.) 1st Pfd.....	60	60
Union-Buffalo (S. C.) 2d Pfd.....	15	15
Victor Mfg. Co. (S. C.).....	110	115
Warren Mfg. Co. (S. C.).....	80	90
Warren Mfg. Co. (S. C.) Pfd.....	100	105
Washington Mills (Va.).....	28	28
Washington Mills (Va.) Pfd.....	106	110
Whitney Mfg. Co. (S. C.).....	110	110
Wiscasset Mills (N. C.).....	135	135
Woodruff Cotton Mills (S. C.).....	95	100
Woodside Cotton Mills (S. C.).....	100	100
Watts Mills (S. C.).....	70	70
Williamston Mills (S. C.).....	120	125

FINANCIAL CORPORATIONS.

Ala., Decatur.—Plans are reported being made to organize the Tennessee Valley Building and Loan Association with \$100,000 capital. Among those interested are D. F. Green, vice-president Tennessee Valley Bank; W. H. Aycock and W. R. Seeley.

Ala., Phil Campbell.—Official: A new bank (name as yet undecided) is to be incorporated with capital of \$10,000 or \$12,000. M. M. Duke is temporary chairman; Seth R. Mapes, subscription committeeman; J. Gaiser of Russellville, equipment. Business is to begin about October 1.

Ala., Tallahassee.—The First National Bank of Tallahassee, capital \$25,000, is reported being organized; H. S. Holloway, correspondent, Tallahassee, Ala.; G. D. Patterson, S. P. Storrs, A. W. Herron and M. R. Jordan, directors.

Ark., Cabot.—The Cabot Trust Co., capital \$50,000, is reported organized with Geo. P. Murrell president, J. O. Johnson vice-president, J. W. Lowman secretary-treasurer; directors, O. H. Davis, J. C. Alexander, R. Murrell and Dr. T. J. Rooker. Business will begin by October 15.

Ark., Caddo Gap.—Regarding the report that a new bank is being organized, C. D. Gibbs, one of those interested writes: "Have been trying to get bank organized here, but have failed so far."

Ark., Center Point.—The Elberta State Bank is reported to have begun business; capital \$10,000. John A. Hughes is president and E. B. Lindsey is cashier.

Ark., Sheridan.—The Arkansas Farm Loan & Trust Co. of Sheridan has filed articles of incorporation; capital \$50,000; M. W. Elkins, president; L. L. Coffman, vice-president; W. E. Loeke, secretary and treasurer.

D. C., Washington.—The 7th St. Savings Bank, authorized capital \$50,000 with \$30,000 paid in, is reported chartered; incorporators, Somerset R. Waters, August H. Plugge, Harry Kaufman, C. W. Fairfax and Chas. S. Shreve, Jr.

Fla., Jacksonville.—The First Savings Bank, capital \$30,000 and \$6000 surplus, is reported to have begun business at 34 W. Forsyth St.; D. J. Herrin is president and Chas. H. Address cashier.

Fla., Lula.—The Merchants and Farmers' Bank of Lula will file articles of incorporation; capital \$25,000; M. W. Cozart, president; J. T. Johnson, first vice-president; R. C. Gillen, second vice-president; C. Y. McMullen, cashier; directors, M. W. Cozart, J. T. Johnson, R. C. Gillen, J. J. Sullivan, J. M. Fralick, S. Gillen and O. F. Ritch.

Fla., Miami.—The Miami Building and Loan Association, capitalized at \$50,000, is reported being organized with directors thus: Frank B. Shotts, president; T. V. Moore, vice-president; C. H. Ward, secretary; Theo. Hoffstatter, Joseph A. McDonald, John Seybold, Julius Smith.

Fla., Zephyrhills.—The First State Bank of Zephyrhills is reported to have begun business; capital \$15,000. Directors: E. E. Skipper, president; E. W. Stapleton, first vice-president; C. A. Boswell, second vice-president; E. W. Stapleton, cashier; G. B. Skipper, M. E. Skipper.

Ga., Atlanta.—The Standard Bond & Mortgage Co., capital \$10,000, is reported incorporated by John W. Sparkman, Jefferson county, Alabama, and J. S. Slicer, Empire Building.

Ga., Dover.—The Bank of Dover, capital \$25,000, is reported incorporated by E. S. Lane, M. J. Ennis, W. H. Cooper, W. A. Wilson, William M. Howard, R. H. Freeman, L. B. Hollingsworth, J. N. Call, A. W. Robinson and J. B. Robinson.

Ky., Frensburg.—Official: The Farmers' Trust Co., incorporated; capital \$15,000. Officers and directors not yet elected. Business is expected to begin about September 16.

Ky., Midway.—Local business men are re-

ported to have organized a new bank with \$30,000 capital.

Md., Baltimore.—The Lord Baltimore Permanent Building and Loan Association of Baltimore City is incorporated with \$520,000 capital by Joseph J. Hock, George F. Whiting, John H. A. Lehne, Richard B. Fentress, Richard B. Tippet, Chas. G. Guth, John H. Shaub.

Md., Brandywine.—The Southern Maryland German-American Bank is reported approved.

Md., Towson.—The Baltimore County Bank will, it is reported, be chartered under the laws of Maryland with \$20,000 capital; \$5000 surplus; incorporators, John Crowther, Duane H. Rice, Martin J. O'Hara, W. Clarence Cramer and Ernest C. Hatch.

Md., Upper Marlboro.—The Merchants and Planters' Bank, capital \$30,000, is reported being organized by J. Enos Ray and others.

Mo., Kansas City.—The Farmers' Trust Co. is reported being organized with \$500,000 capital.

S. C., North Augusta.—The Home Bank, capital \$25,000, is reported to have been granted a commission; petitioners, Nolan Bowden and J. C. Lamar, both of North Augusta.

Tenn., Jackson.—The Security Bank & Trust Co. is reported to have begun business on Liberty St.; capital \$50,000. A. M. Alexander is president; B. H. Blalock, cashier; Oliver Benton, assistant cashier; R. L. Balch, manager of the savings and insurance departments.

Tenn., Nashville.—The Fourth and First National Bank, which is a consolidation of the Fourth National and First National Banks, is reported to have begun business in the Stahlman Bldg. James E. Caldwell, president; F. O. Watts, chairman board of directors; J. H. Fall, Walter Keith, D. S. Williams, W. C. Dibrell, T. D. Webb and J. S. McHenry, vice-presidents; Randall Currell, cashier; Frank K. Houston, G. W. Pyle and J. R. Johnson, assistant cashiers; D. M. Wright, auditor.

Tex., Aransas Pass.—The First National Bank of Aransas Pass, capital \$25,000, is reported being organized; T. B. Wheeler, correspondent, Aransas, Tex.; A. Warren, W. H. Young, L. J. Usher and C. E. Henry, directors.

Tex., Athens.—The directors of the First National Bank have, it is reported, incorporated a loan company with \$100,000 capital.

Tex., Hebron.—The Hebron State Bank is reported to have filed application for charter; capital \$10,000; directors, W. C. Farnaux of Carrollton, R. M. Everett, M. T. Griffin, J. H. Morgan, Jr., and J. B. Preston of Hebron, J. R. McFarland of Dallas and J. W. Shepard of Plano.

Tex., Houston.—The Commonwealth Trust Co., with offices in the Chronicle Building, is reported to have begun business. W. E. Richards is president.

Tex., Lyford.—The First State Bank of Lyford, capital \$10,000, is reported incorporated by F. A. Carlson, O. G. Schlecht, C. E. Craig, E. W. Archer, A. D. Struthers.

Tex., McBade.—Official: The McBade Guarantee State Bank chartered; capital

Established 1835
The Merchants National Bank
 South and Water Sts., BALTIMORE, MD.
 DOUGLAS H. THOMAS, President.
 WM. INGLE, Vice-Pres. and Cashier.
 J. C. WANDS, Asst. Cashier.
 JOHN B. H. DUNN, Asst. Cashier.
 Capital \$1,500,000
 Surplus and Profits - \$900,000
 Deposits \$12,000,000
 Accounts of Banks, Bankers, Corporations and Individuals solicited. We invite correspondence.

THE FIRST NATIONAL BANK
 OF KEY WEST, FLA.
 United States Depository and Disbursing Agent.
 Capital - \$100,000
 Surplus and Undivided Profits - \$40,000
 A general banking business transacted. Special attention given to collections.

INVESTMENT SECURITIES
 Southern Stocks and Bonds
 Municipal and Corporation
 Cotton Mill Stock a Specialty
 WM. S. GLENN, Broker - SPARTANBURG, S. C.

JOHN NUVEEN & CO.
 1st Nat. Bank Bldg., CHICAGO
 We purchase SCHOOL, COUNTY and MUNICIPAL BONDS. Southern Municipal Bonds a Specialty.
 Write us if you have bonds for sale.

Delaware Trust Company
 WILMINGTON, DELAWARE
 INCORPORATING under broad, liberal, safe and stable Delaware laws. A fully equipped department for proper organization and registration of corporations.
 BANKING AND TRUST department gives special attention to out of town customers' accounts.
 TITLE DEPARTMENT examines and guarantees title to realty throughout Delaware.
 REALTY DEPARTMENT has sites for manufacturing industries. Modern Methods of management of property.
 EDWARD T. CANBY, President.
 J. ERNEST SMITH, V.-Pres. and Gen. Counsel.
 WM. G. TAYLOR, Treasurer.
 HARRY W. DAVIS, Secretary.
 W. W. PUSEY, 2d Title and Real Estate Officer.

H. B. Wilcox, President. Blanchard Randall, V.-Pres.
 Wm. S. Hammond, Cashier.
 Saml. W. Tschudi, A. Cash. R. E. Bolling, A. Cash.
The First National Bank
 17 South St., Baltimore, Md.
 Capital - \$1,000,000
 Surplus and Net Profits - 400,000
 Deposits - 6,500,000
 Especially well equipped to handle the business of Southern Banks, Corporations, and Individuals and Manufacturers. We cordially invite correspondence and interviews.

The National Exchange Bank
 OF BALTIMORE, MD.
 Hopkins Place, German and Liberty Sts.
 Capital, \$1,000,000
 July 15, 1908, Surplus and Profits, \$671,631.60
 OFFICERS:
 WALDO NEWCOMER, President.
 SUMMERFIELD BALDWIN, Vice-Pres.
 R. VINTON LANSDALE, Cashier.
 C. G. MORGAN, Asst. Cashier.
 Accounts of Mercantile Firms, Corporations, Banks, Bankers and Individuals Invited.

SURETY BONDS
Fidelity & Deposit Co.
 OF MARYLAND
 Home Office, - BALTIMORE, MD.
 Total Assets Dec. 31, 1911, \$8,133,000.57
 Pioneer Surety Co. of the South.
 Becomes Surety on bonds of every description.

AGENTS IN ALL PRINCIPAL CITIES
 HARRY NICODEMUS, Sec'y and Treas.
 EDWIN WARFIELD, President

Southern Steam Railroad Securities
 DEALT IN
F. J. LISMAN & CO.
 Specialists in Steam R. R. Securities
 Members New York Stock Exchange
 30 Broad Street NEW YORK
 39 Pearl Street, Hartford
 Land Title & Trust Bldg., Philadelphia

CAPITAL AND SURPLUS - \$3,500,000
THE BALTIMORE TRUST CO.
 BALTIMORE, MD.
 Solicits Accounts of Banks, Bankers, Corporations and Individuals.
 Interest Allowed on Deposits Subject to Check.
 Special Rates Made on Time Deposits.

OFFICERS
 DOUGLAS H. GORDON, President
 GEORGE C. MORRISON, Vice-Pres.
 CHAS. D. FENHAGEN, Vice-Pres.
 EDWIN W. POE, Sec.-Treas.

BUSINESS ANALYSTS INVESTIGATORS SYSTEMATIZERS
YOUR BUSINESS SOLICITED
P. W. ROBERTSON, President
 Certified Public Accountant.
 Fellow Institute of Accounts, New York.
 Fellow Va. Society of Public Accountants.

WE BUY City, County, School and Drainage BONDS
 FROM MUNICIPALITIES OR CONTRACTORS
 We are in position to pay HIGHEST PRICES. Write or wire us your offerings.
THE NEW FIRST NATIONAL BANK, Assets, \$6,000,000 Columbus, Ohio

We Finance
 Electric Light, Power and Street Railway Enterprises
 With Records of Established Earnings
We Offer
 Bankers and Investment Dealers
 Proven Public Utility Securities
 Correspondence Solicited
Electric Bond and Share Company
 (Paid-up Capital and Surplus, \$7,800,000)
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Phone Main 432. Member N. O. Stock Exchange
S. A. TRUFANT
 403 Hennen Building
 NEW ORLEANS, LA.
Investment Securities
CHARLES NEVILLE
 Certified Public Accountant
 501-502 Savannah Bank & Trust Co. Bldg.
 SAVANNAH, GA.
 Employing a staff of thoroughly qualified accountants.
CORPORATIONS ORGANIZED CAPITAL NEGOTIATED
 For firms who desire additional capital to increase their business. Will contract to sell issue of stock or bonds of any legitimate business enterprise, either developed or undeveloped.
C. R. SKINNER,
 Fidelity Building, Philadelphia, Pa.

COTTON YARNS
Paulson, Linkroum & Co.
 COMMISSION MERCHANTS
 NEW YORK PHILADELPHIA CHICAGO
 87-89 Leonard Street 120 Chestnut Street 206 S. Market Street

RESOURCES - \$14,975,352.57
 DEPOSITS DEC. 31, 1909.....\$ 8,041,252.59
 DEPOSITS DEC. 31, 1910..... 8,809,843.00
 DEPOSITS DEC. 31, 1911..... 10,344,670.67
 This growth indicates that we have the ability and disposition to give GOOD TRUST COMPANY SERVICE. We can prove it—to your advantage.
 ALLOWS INTEREST on daily balances of \$500 or over, subject to check, and special rates for time deposits.
 ACTS AS TRUSTEE under mortgage, Registrar and Transfer Agent of Stocks and Bonds of Corporations.
 Securities held on deposit for out-of-town corporations and individuals.
 Acts as Financial Agent for Municipalities and Corporations.
MERCANTILE TRUST & DEPOSIT COMPANY
 OF BALTIMORE
 CAPITAL - \$1,500,000.00 SURPLUS - \$3,000,000.00

Never Apply Dressings TO "AMERICAN" Transmission Rope

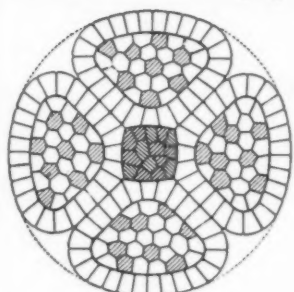


FIG. 12
 11" American Transmission Rope Showing Lubricating and Cover Yarns

It Doesn't Need Dressing

It is permanently self-lubricating; the core about which the strands are laid and several yarns of each strand are impregnated with a specially prepared lubricating and waterproofing compound, which prevents internal wear and preserves the fibre in its original state.

"AMERICAN" Transmission Rope has proved itself not alone the most durable of transmission ropes, but the **cheapest, most efficient and most economical** of all known means for transmitting power.

Write for our "BLUE BOOK OF ROPE TRANSMISSION."

American Manufacturing Company

Makers of "American" Transmission Rope

Noble and West Sts.

Brooklyn, N. Y. C.

chartered; capital \$50,000. W. H. McCullough is president and W. W. Woodson cashier.

Va., Graham.—The Miners' Bank of Commerce is reported to have begun business.

Va., Norfolk.—The Fidelity Corporation of America, capital \$300,000 to \$500,000, is reported to have been granted a charter; Arthur J. Morris, president; Fergus Reid, first vice-president; J. H. Cofer, second vice-president; H. D. Johnson, secretary, and H. T. Campbell, treasurer, all of Norfolk; Morris, Garnett & Cotton are general counsel; directors, Raymond Dupuy, Norfolk, Va.; J. H. Cofer, Norfolk, Va.; H. M. Kerr, Norfolk, Va., cashier National Bank of Commerce, Norfolk, Va.; Hollins N. Randolph, Atlanta, Ga.; Parker & Scott, Atlanta, Ga.; N. B. Scott, Washington, D. C.; C. I. T. Gould, Baltimore, Md., president of Central Trust Co. of Baltimore; Frank S. Bright, Washington, D. C., trust officer of Continental Trust Co. of Washington, D. C., and others.

Va., Orange.—Official: The Shackelford-Warren Insurance Agency incorporated; capital \$10,000. Directors: H. C. Warren, president; H. G. Shackelford, secretary and treasurer; R. C. Slaughter, W. D. Lillard, V. R. Shackelford, all of Orange, and F. T. Champion of Gordonsville. Business began July 1.

Va., Roanoke.—The Bank of Commerce, capital \$100,000 to \$200,000, is reported incorporated by George H. P. Cole, president; John W. Penn, secretary and cashier; G. C. Holcomb.

NEW SECURITIES.

Ala., Alabama City.—July 15, it is reported, an election is to be held to vote on \$50,000 of city hall, water-works and sewerage bonds.

Ala., Greensboro.—Reported voted: \$12,000 of school-building bonds.

Ala., Mobile.—The First National Bank of Cleveland, O., according to press dispatches, purchased the \$178,000 of 5 per cent. street-improvement bonds at \$179,335. Laz. Schwartz is Mayor.

Ala., Selma.—Official: The New York Life Insurance Co. is the successful bidder for the \$35,000 of 5 per cent. public-school building bonds at 1.01057; denomination \$1000; dated July 1, 1912; maturity July 1, 1937. J. L. Clay is Mayor.

Ala., Selma.—Reported voted: \$100,000 of Dallas county road bonds.

Ark., Heber Springs.—Reported sold: \$20,000 of 5 per cent. 30-year school district building bonds.

Ark., Sheridan.—Official: Bids will soon be asked for \$12,000 of 6 per cent. Sheridan special school district building bonds; denomination \$500 and \$1000. Bonds were voted May 18. Address School Board.

Fla., Gulfport.—Reported that it is proposed to issue \$8000 or \$10,000 of public improvement bonds. S. J. Webb is Clerk.

Fla., Miami.—The question of issuing \$500,000 of Dade county road-improvement bonds is reported under consideration.

Fla., St. Augustine.—St. John county is reported considering the question of issuing \$500,000 of highway bonds.

Ga., Atlanta.—Press dispatches state that it is proposed to issue \$2,000,000 of street-improvement bonds.

Ga., Brunswick.—An election will probably be held in Glynn county, it is reported, to vote on \$100,000 of road bonds.

Ga., McDonough.—Official: Stacy & Braun purchased on July 1 at par, plus accrued interest to date of delivery, and bonds free to city, \$22,000 of water and \$18,000 of sewer 5 per cent. bonds; denomination \$1000; dated January 1, 1912. Bonds were voted December 11, 1911. Address City Council. E. M. Smith is Mayor.

Ga., Fitzgerald.—The Provident Savings Bank & Trust Co., Cincinnati, O., is reported to have purchased, at \$1100 premium, \$40,000 of paving bonds.

Ga., Waycross.—An official letter confirms report that city contemplates holding an election to vote on bonds, but says that it will be two or three months before details can be determined. Harry D. Reed is Mayor.

Ky., Somerset.—Official: An election is to be held in November to vote on sewer bonds. T. R. Griffin is Mayor.

Ky., Newport.—Official: Bids will be received until noon July 15 for \$50,000 of 4 per cent. 30-year street-improvement bonds; dated July 1, 1912. Address Wm. A. Elmer, Commissioner of Finance.

Ky., Williamsburg.—An election will probably be held in Whitley county on September 21 to vote on \$300,000 of road bonds.

La., Kaplan.—Bids will be received until noon July 19 for \$35,000 of 1-15-year bonds of Coulee de Jon Drainage District of Vermilion parish. F. A. Marceaux is president and A. M. Smith secretary of the Board of Commissioners.

Md., Annapolis.—Bids will be received until 11 A. M. July 16 for \$50,000 of 4½ per cent. Anne Arundel county jail bonds. Denomination \$5000. James S. Smith is president and S. Ogle Tilghman clerk, Anne Arundel County Commissioners.

Md., Berlin.—John Bartlett of Baltimore is reported to have purchased \$6000 of improvement and extension bonds. Orlando Harrison is Mayor.

Miss., Jackson.—Official: Bids will be received until noon the first Monday in August for \$100,000 of 5 per cent. 25-year Hinds county bonds; dated January 2, 1911. W. W. Downing is clerk of the Board. Further particulars will be found in the advertising columns.

Miss., Jackson.—The City Council is reported to have passed an ordinance providing for a special election to vote on \$35,000 of abattoir bonds.

Miss., Lucedale.—Official: John Nuveen & Co., Chicago, purchased on June 3 at \$30,201 the \$30,000 of 5 per cent. 1-30-year road-construction bonds; denomination \$1000; dated July 1, 1912. E. V. McKay is Chancery Clerk George County.

Miss., Paulding.—Reported that the Wm. R. Bon Company and Montgood Company of St. Louis, Mo., have been awarded at par the \$25,000 of 5 per cent. 20-year road bonds of district 5, Jasper county. S. W. Aborey and S. F. Risher of Heidelberg and O. P. Lee are Road Commissioners for the district.

Miss., Prairie.—The First State Bank of Prairie is reported to have purchased at par and accrued interest \$3500 of 5 per cent. street-improvement bonds.

Miss., Senatobia.—Official: Bids will be opened on August 1 for \$10,000 of 5 per cent. 20-year bonds of Senatobia Creek Drainage District, Tate county; dated April 1, 1911. W. E. Still is secretary of the district. Further particulars will be found in the advertising columns.

Mo., Cassville.—Reported voted: \$43,000 of Barry county courthouse bonds.

Mo., Springfield.—Reported that \$40,000 of 6 per cent. current expense bonds are to be issued.

Mo., West Plains.—Official: J. A. Shepard, clerk Board of Commissioners, West Plains Special Road District, is now receiving bids for \$30,000 of 5 per cent. road bonds voted June 22, 1912; denomination \$500.

Mo., Villa Heights, P. O. Joplin.—August 12, it is reported, the election will be held to vote on \$20,000 of bonds for municipal water-works plant in Villa Heights. Jesse F. Osborne is Mayor.

N. C., Andrews.—Official: H. T. Holtz & Co., Chicago, purchased on June 29, at \$311 premium, \$10,000 of 5½ per cent. 30-year school-building bonds; denomination \$500 or \$1000. J. Q. Barker is chairman school trustees.

N. C., Lexington.—Reported that on August 5 an election is to be held in Abbott's Creek Township, Davidson county, to vote on \$15,000 of railroad-aid bonds.

N. C., Red Oak Township.—Bids will be received until July 18 for \$100,000 of 30-year Red Oak township road-improvement bonds; interest 5 or 6 per cent.; denomination \$100 or multiples thereof.

N. C., Sanford.—Bids will be received until noon August 5 for \$25,000 of 5 per cent. 30-year Lee county bonds; denomination \$500. Address A. A. F. Seawell, County Attorney, Sanford.

N. C., Statesville.—Official: Bids will be received until 10 A. M. July 22 for \$150,000 of 5 per cent. 20-30-year Iredell county road-improvement bonds; denomination \$1000; dated August 1, 1912. N. B. Mills is chairman Board of Commissioners Iredell County and J. E. Boyd clerk to the board. Further particulars will be found in the advertising columns.

N. C., Wilson.—Emery, Peck & Rockwood of Chicago are reported to have purchased, at \$1261.86 premium, \$74,000 of 5 per cent. water and light refunding bonds.

N. C., Winston-Salem.—Official: July 23 an election is to be held to vote on \$100,000 of street, \$50,000 of water-works, \$60,000 of school, \$85,000 of sewer, \$15,000 of park and \$90,000 of hospital bonds. R. J. Dallon is Mayor and W. T. Penry, Clerk.

Okla., Guthrie.—Official: July 10 an election is to be held to vote on \$25,000 of 5 per cent. 25-year bridge bonds; denomination \$1000; dated August 1, 1912. J. E. Nissley is Mayor.

Okla., Kenefick.—Official: The City Loan & Trust Co., Gainesville, purchased on June 24 the water-works plant bonds at \$14,650. W. E. Strickland is Town Clerk.

Okla., Muskogee.—An election is to be held, it is reported, to vote on \$150,000 of park bonds.

Okla., Sand Springs.—Official: McMahon of Oklahoma City purchased at 3.75 above par \$30,000 of 6 per cent. 20-year school district bonds; denomination \$500. John Hall is Clerk, Sand Springs.

S. C., Cheraw.—Official: Bids will be received until noon July 18 by D. L. Tillman, Town Secretary, for \$77,000 of 5 per cent. 20-40-year bonds, \$47,000 being for water-works and \$30,000 for sewers; denomination \$1000. Further particulars will be found in the advertising columns.

S. C., Eufaula.—Reported voted: \$8000 of Eufaula school district building bonds.

S. C., McBee.—Reported voted: \$8000 of 5 per cent. 20-year school bonds.

S. C., Walhalla.—Reported voted: \$13,000 of school bonds of Walhalla School District No. 26.

Tenn., Chattanooga.—Bids will be received until 10 A. M. July 15 for \$5509.32 of 6 per cent. 1-4-year bonds of Paving District No. 149; dated June 27, 1912. T. C. Thompson is Mayor.

Tenn., Dyersburg.—An election is to be held in Dyer county, according to press dispatches, to vote on \$150,000 of road bonds.

Tenn., Jackson.—Local banks are reported to have purchased the \$125,000 of 4½ per cent. school bonds at par and accrued interest.

Tenn., Knoxville.—The Tennessee Indemnity Co. of Knoxville is reported to have purchased, at \$800 premium, the \$25,000 of Knox county pike repair bonds.

Tenn., Lookout Mountain.—August 8, it is reported, the election will be held to vote on \$25,000 of street-improvement bonds.

Tenn., Tullahoma.—Reported that bids will be received until noon July 20 by J. F. Daniel, Recorder, for \$25,000 of 5 per cent. 5-20-year sewerage bonds.

Tex., Austin.—The Attorney-General is reported to have approved the following securities: \$20,000 of water-works improvement and \$25,000 of street-improvement 5 per cent. 10-40-year bonds of Terrell, Tex.; \$8000 of 5 per cent. 10-20-year Manor (Travis county) independent school district bonds; \$2500 of 5 per cent. 5-40-year Penelope independent school district, Hill county, bonds; \$12,000 of 5 per cent. 20-40-year bonds of Cross Plains independent school district (Callahan county); \$3325 of 5 per cent. 20-40-year bonds of Ellis county common school district No. 49.

Tex., Bartlett.—Prairie Dell School District will vote, it is reported, on \$5000 of school-building bonds.

Tex., Bastrop.—Official: Voted May 14: \$80,000 of 5 per cent. 20-40-year road-improvement bonds of Justice precinct No. 1, Bastrop county; denomination \$500. Address J. B. Price.

Tex., Port Arthur.—Official: July 16 an election is to be held to vote on \$20,000 of city hall and \$10,000 of fire station and equipment bonds. G. N. Bliss is Mayor.

Tex., Fort Worth.—An election is to be

held, it is reported, to vote on \$100,000 of municipal hospital bonds.

Tex., Bishop.—Reported voted: \$35,000 of school-building bonds.

Tex., Dallas.—According to press dispatches, \$1,025,000 of 4½ per cent. 10-40-year bonds are to be placed on the market; \$200,000 for city hall, \$400,000 for water-works, \$125,000 for fire department, \$200,000 for public schools and \$100,000 for sanitary sewers.

Tex., El Paso.—Reported that an election is to be held in El Paso county to vote on \$71,000 of irrigation bonds.

Tex., Ennis.—Reported voted: \$13,000 of school-building bonds.

Tex., Gonzales.—The Share & Mortgage Co.

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Look at the imprints on checks passing through your office. If you are south of Mason and Dixon's Line and East of the Mississippi River, you will find more of our imprints than of any other. Of course there is a good reason.

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Burroughs Service comes to the "fire" before the idleness of your machine causes a serious loss.

An insurance policy doesn't remove the need for a fire department. Neither can perfect material and workmanship in the product prevent accidents in its use.

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